FIG. 1

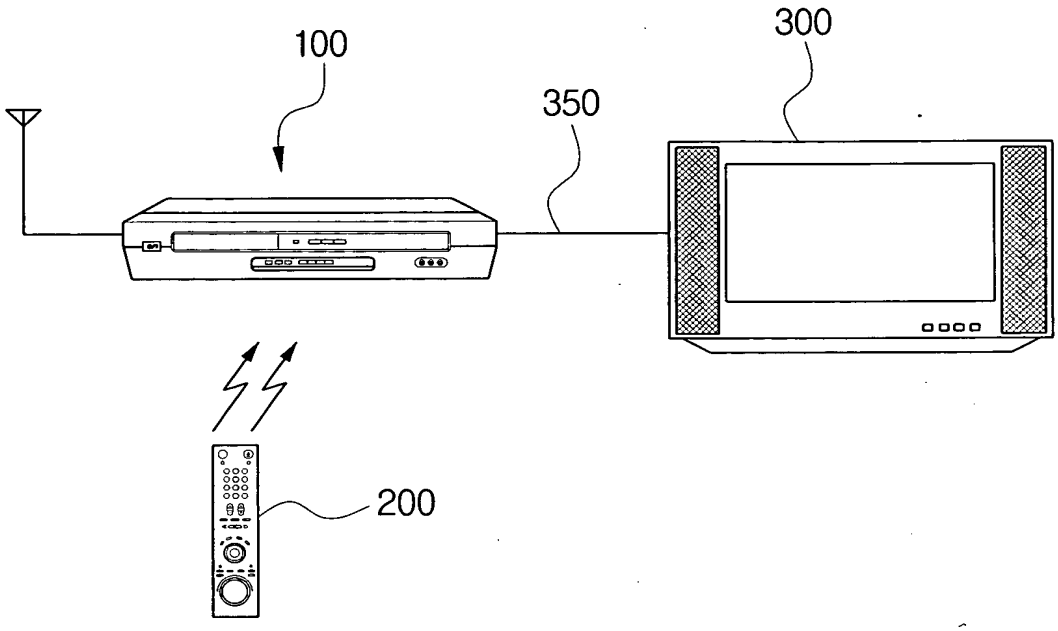


FIG. 2

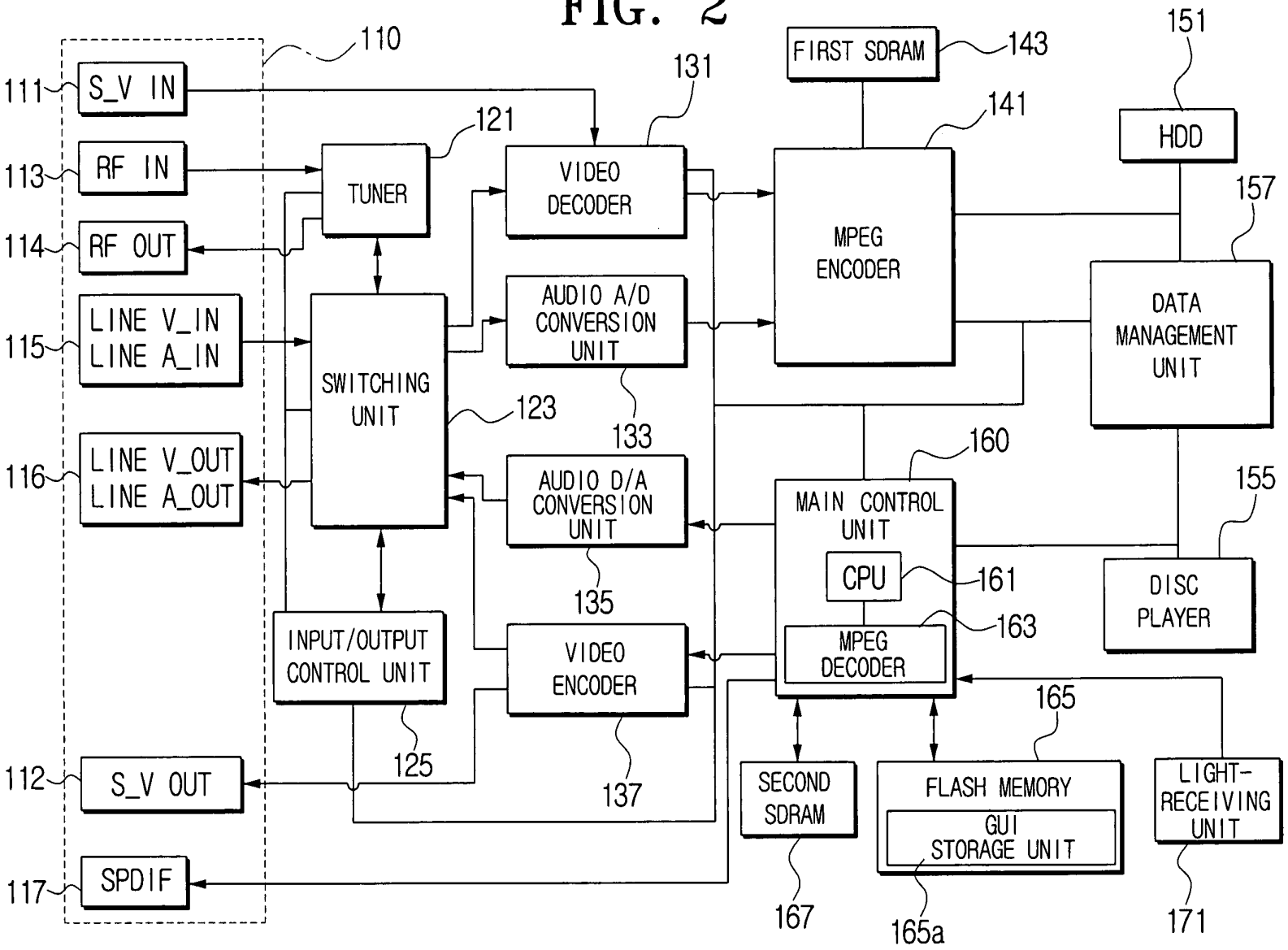

110
111
S_V IN
113
RF IN
114
RF OUT
115
LINE V_IN
LINE A_IN
116
LINE V_OUT
LINE A_OUT
112
S_V OUT
117
SPDIF
TUNER
121
SWITCHING UNIT
123
INPUT/OUTPUT CONTROL UNIT
125
VIDEO DECODER
131
AUDIO A/D CONVERSION UNIT
133
AUDIO D/A CONVERSION UNIT
135
VIDEO ENCODER
137
FIRST SDRAM
143
MPEG ENCODER
141
MAIN CONTROL UNIT
160
CPU
161
MPEG DECODER
163
SECOND SDRAM
167
FLASH MEMORY
165
GUI STORAGE UNIT
165a
HDD
151
DATA MANAGEMENT UNIT
157
DISC PLAYER
155
LIGHT-RECEIVING UNIT
171

FIG. 3

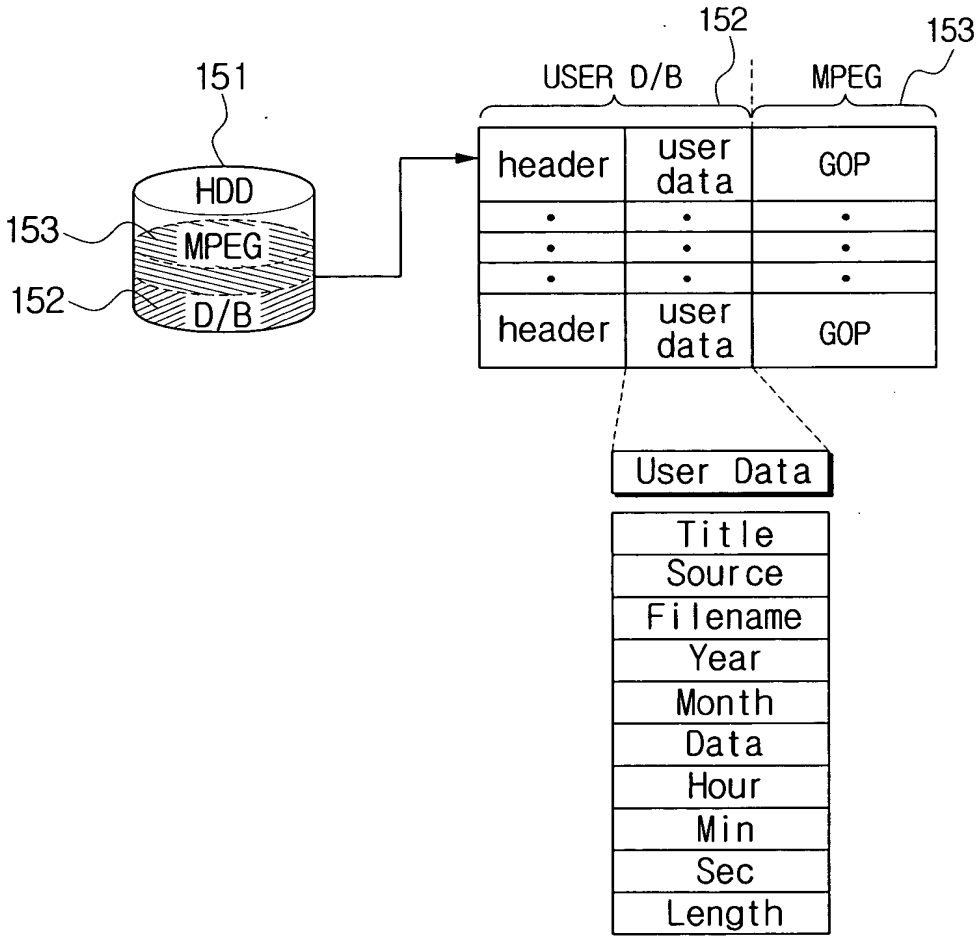

151
152
153
USER D/B
MPEG
HDD
MPEG
D/B
153
152
header
user data
GOP
header
user data
GOP
User Data
Title
Source
Filename
Year
Month
Data
Hour
Min
Sec
Length

FIG. 4

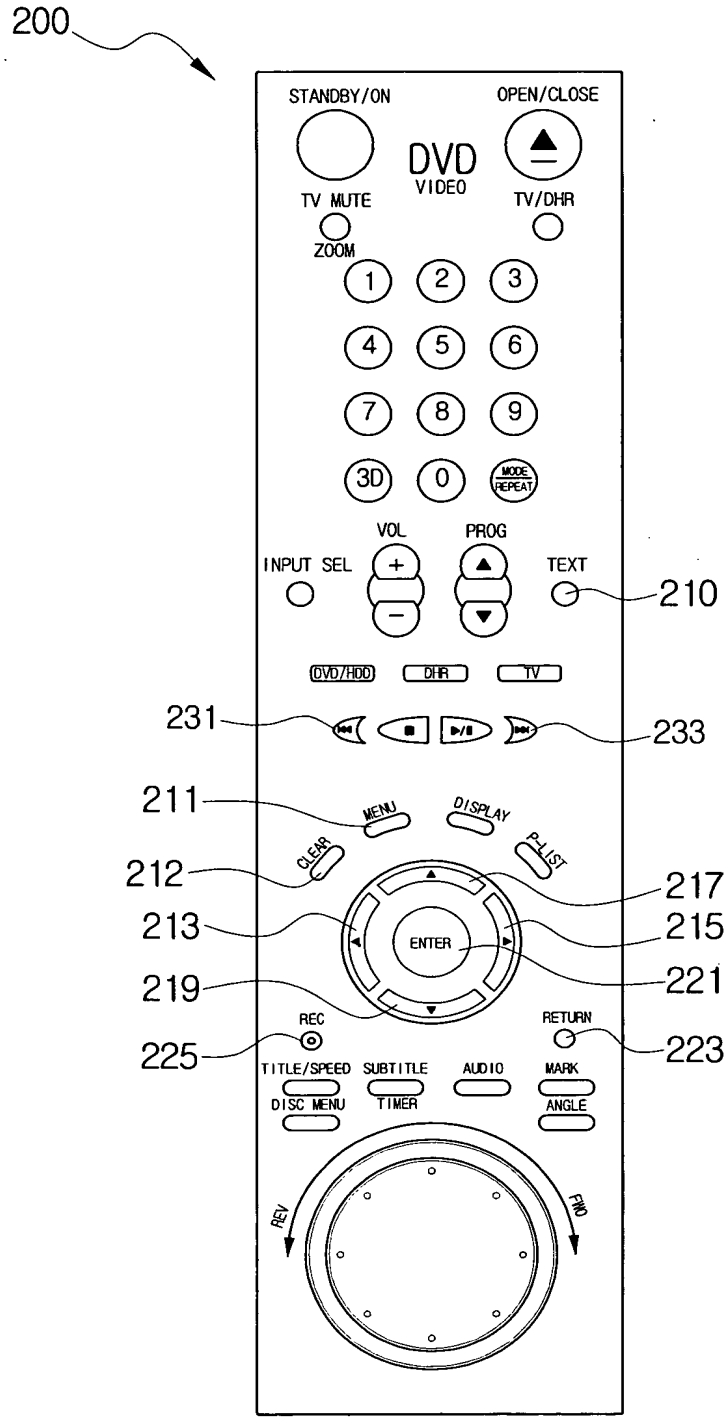

200
STANDBY/ON
OPEN/CLOSE
DVD
VIDEO
TV MUTE
TV/DHR
ZOOM
1
2
3
4
5
6
7
8
9
3D
0
MODE
REPEAT
VOL
PROG
INPUT SEL
TEXT
210
DVD/HDD
DHR
TV
231
233
211
MENU
DISPLAY
P-LIST
212
CLEAR
217
213
ENTER
215
219
221
REC
RETURN
225
223
TITLE/SPEED
SUBTITLE
AUDIO
MARK
DISC MENU
TIMER
ANGLE
REV
FWD

FIG. 5

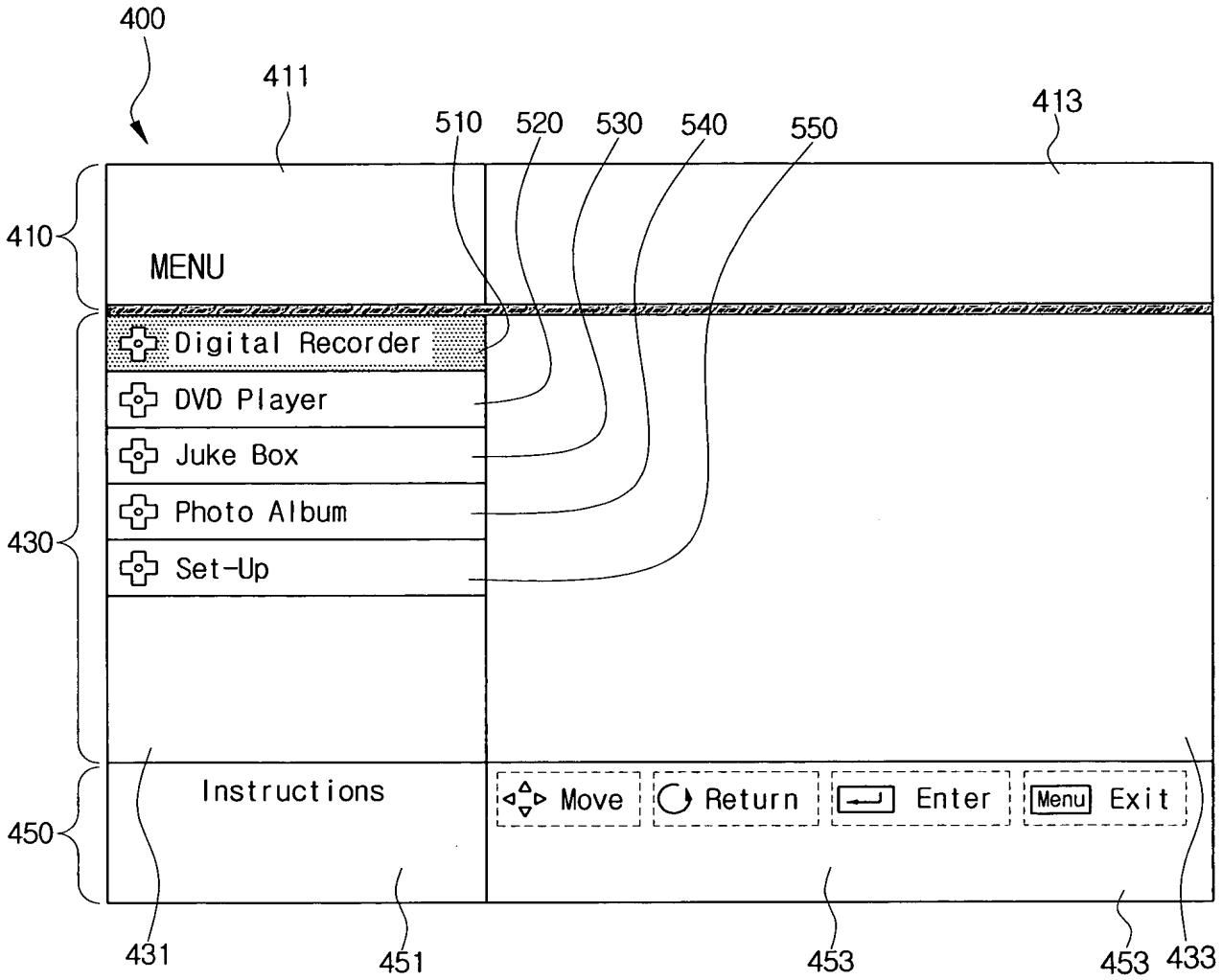

400
411
510
520
530
540
550
413
410
MENU
Digital Recorder
DVD Player
Juke Box
Photo Album
Set-Up
430
Instructions
Move
Return
Enter
Menu
Exit
450
431
451
453
453
433

FIG. 6

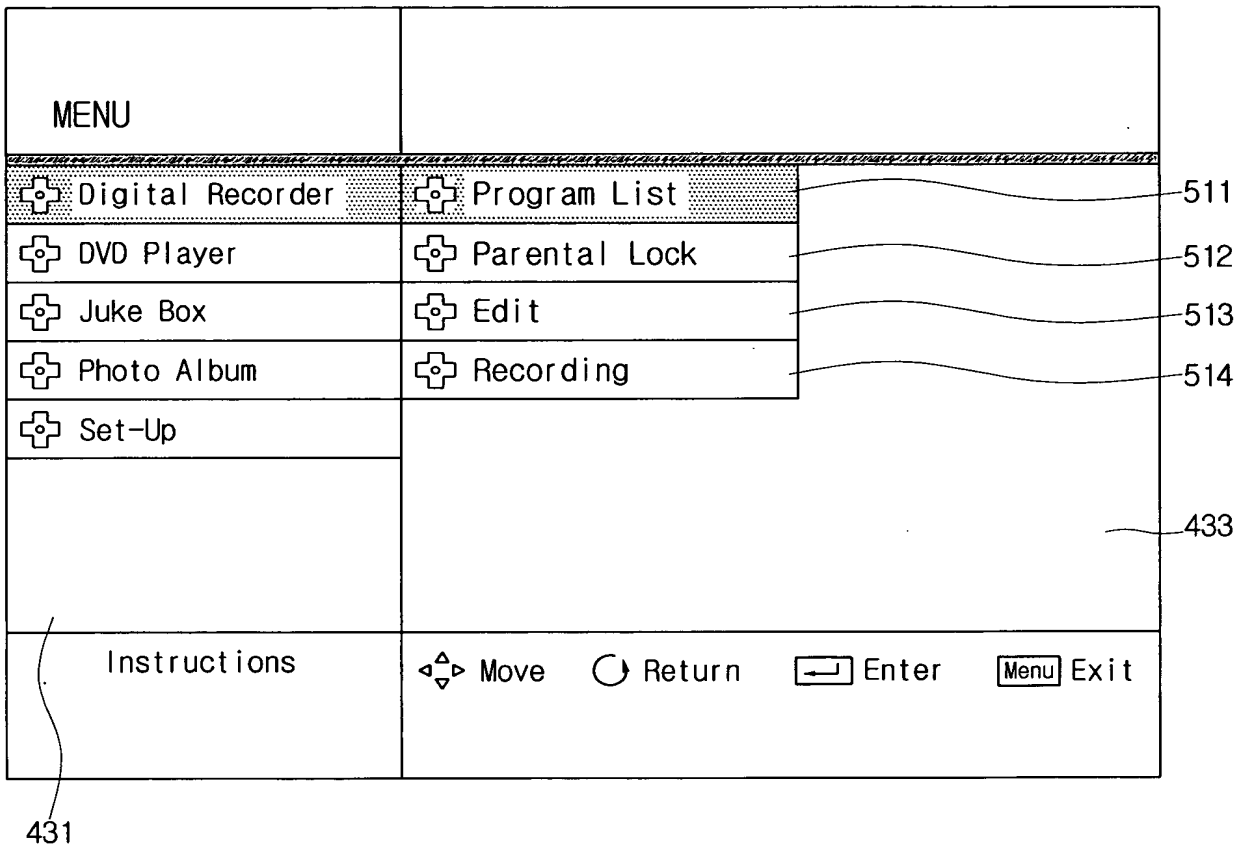

MENU
Digital Recorder
DVD Player
Juke Box
Photo Album
Set-Up
Program List
Parental Lock
Edit
Recording
511
512
513
514
433
Instructions
Move
Return
Enter
Menu Exit
431

FIG. 7

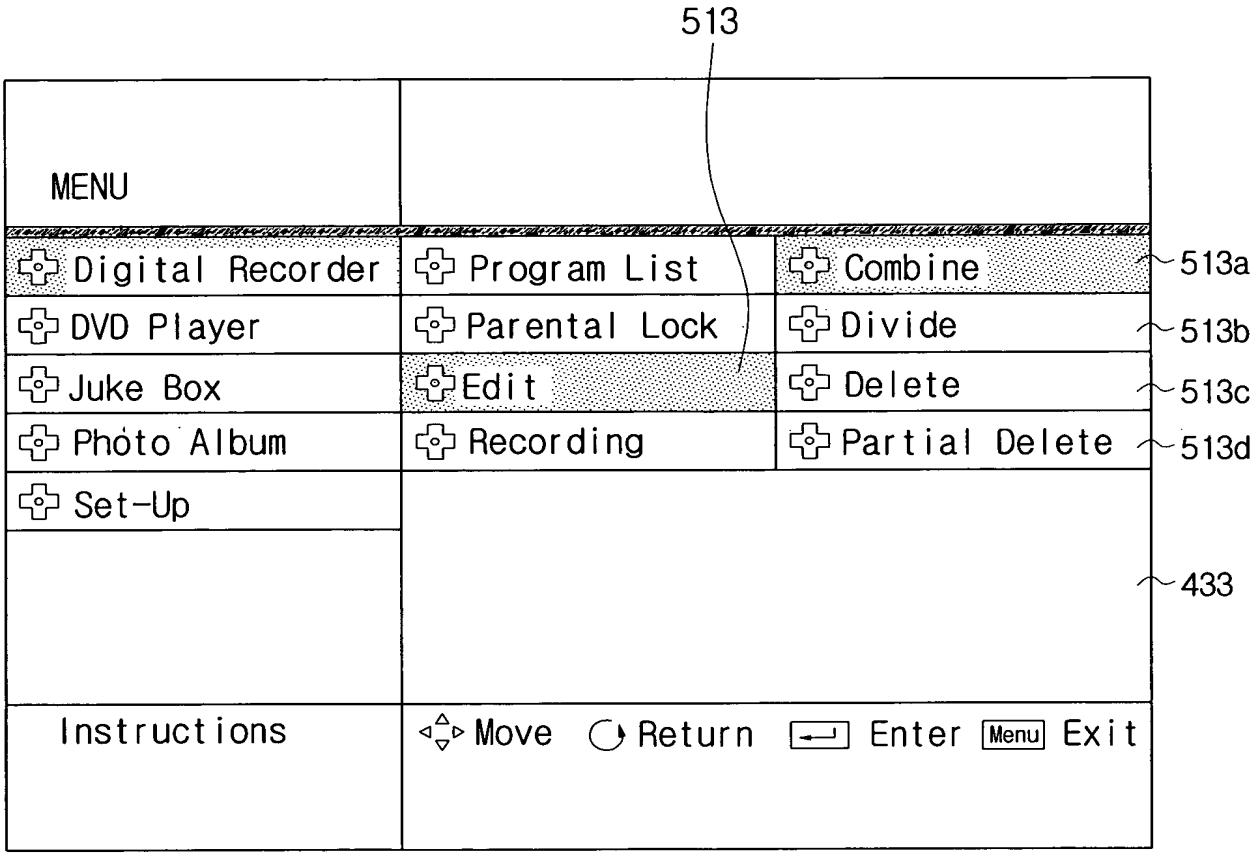

513
MENU
Digital Recorder
DVD Player
Juke Box
Photo Album
Set-Up
Program List
Parental Lock
Edit
Recording
Combine
Divide
Delete
Partial Delete
513a
513b
513c
513d
433
Instructions
Move
Return
Enter
Menu
Exit

FIG. 8

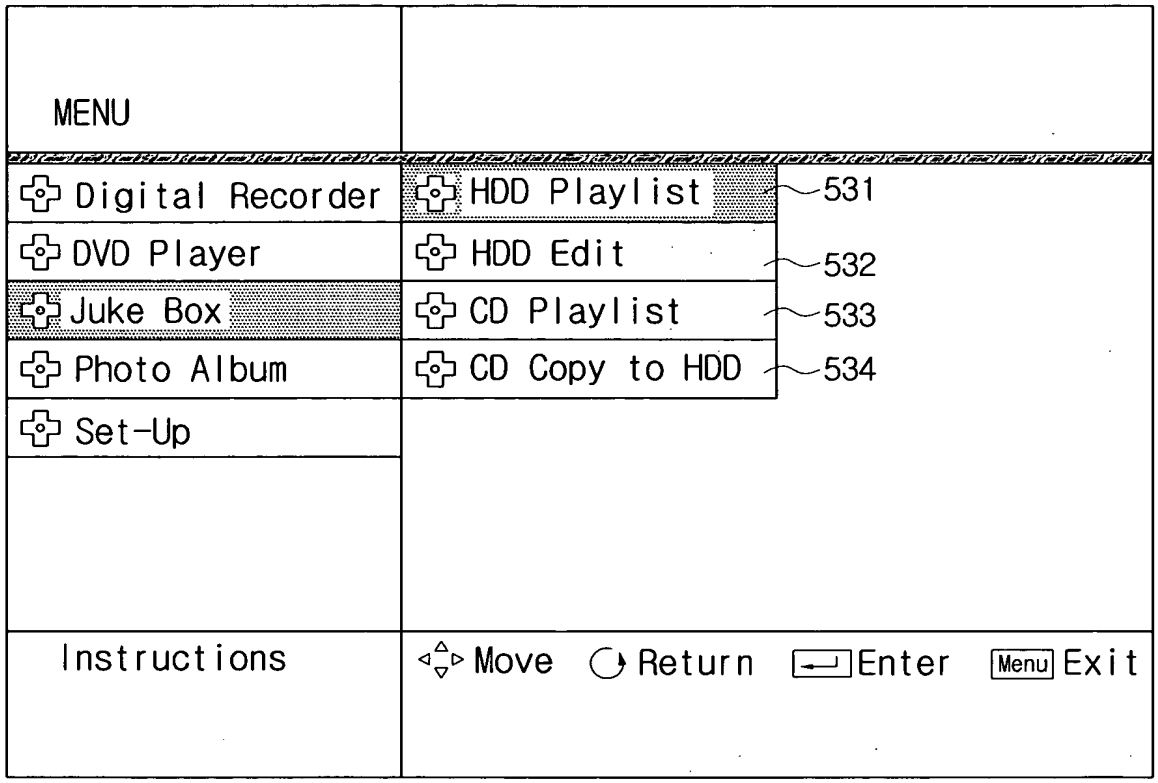

MENU
Digital Recorder
DVD Player
Juke Box
Photo Album
Set-Up
HDD Playlist
HDD Edit
CD Playlist
CD Copy to HDD
531
532
533
534
Instructions
Move
Return
Enter
Menu
Exit

FIG. 9

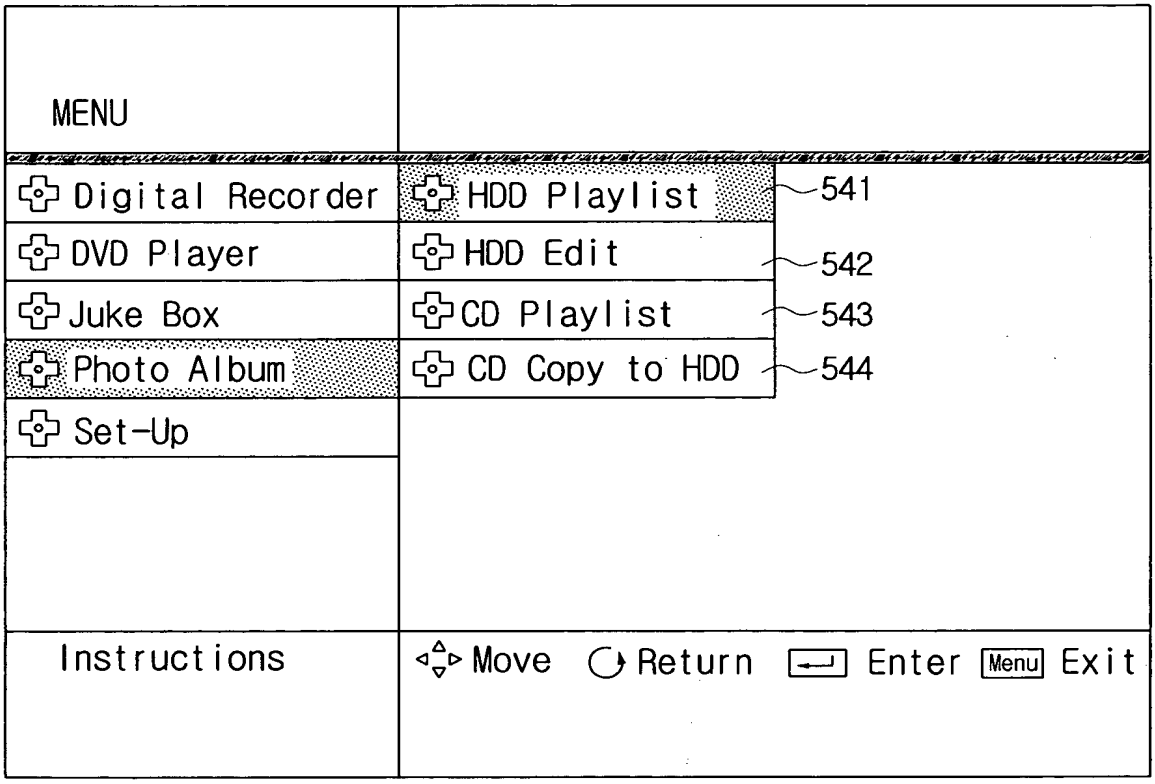

MENU
Digital Recorder
DVD Player
Juke Box
Photo Album
Set-Up
HDD Playlist
HDD Edit
CD Playlist
CD Copy to HDD
541
542
543
544
Instructions
Move
Return
Enter
Menu
Exit

FIG. 10

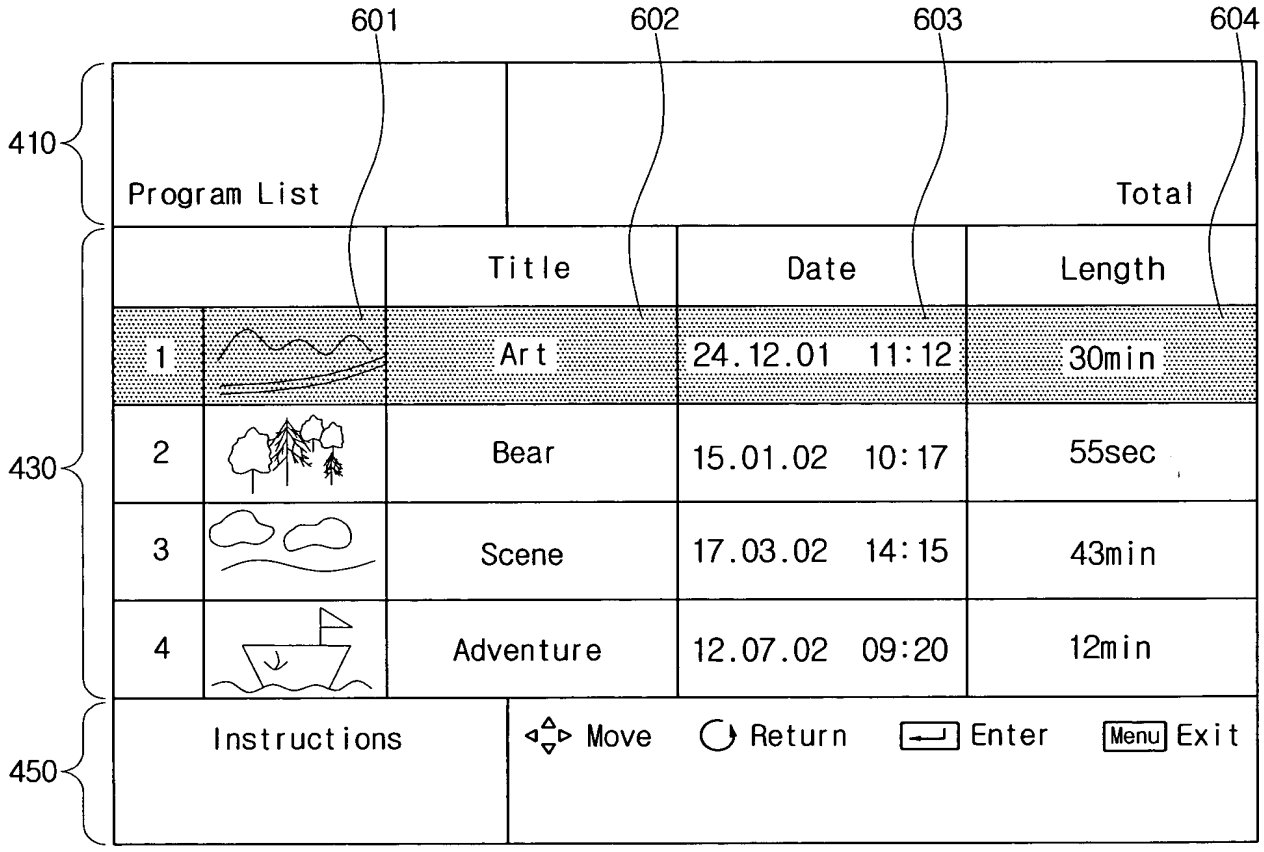

601
602
603
604
410
Program List
Total
Title
Date
Length
430
1
Art
24.12.01 11:12
30min
2
Bear
15.01.02 10:17
55sec
3
Scene
17.03.02 14:15
43min
4
Adventure
12.07.02 09:20
12min
450
Instructions
Move
Return
Enter
Menu
Exit

FIG. 11

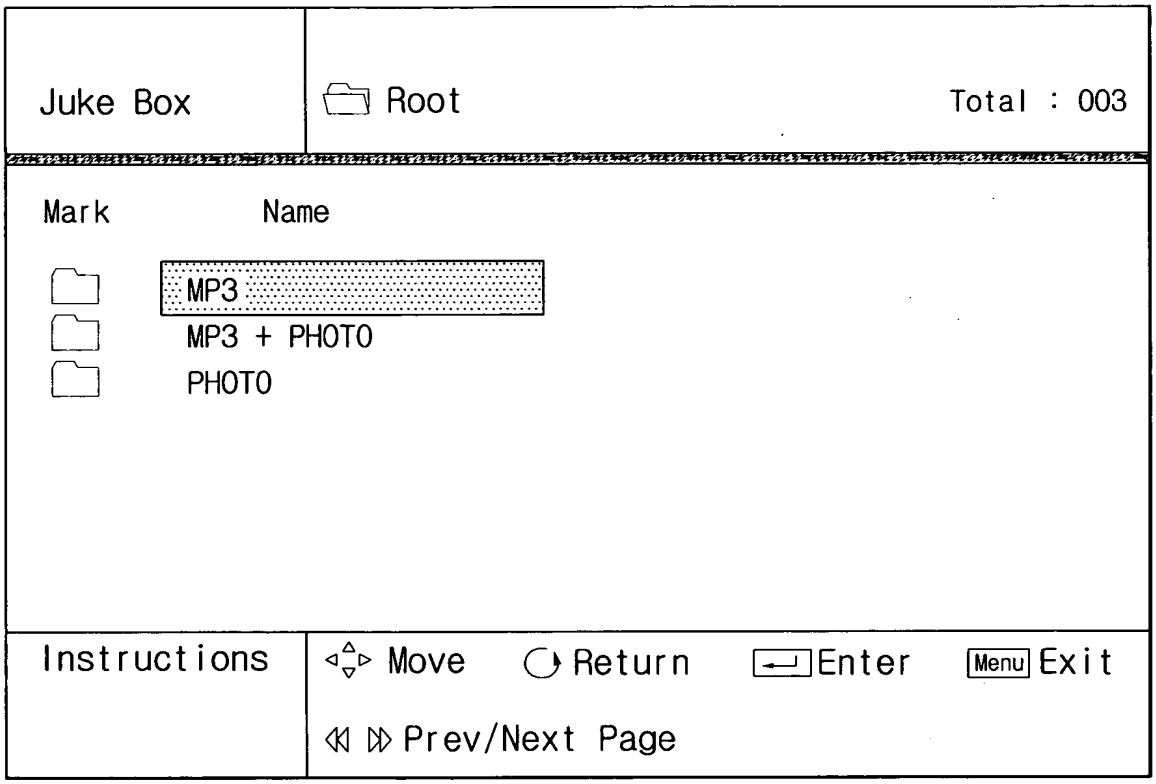

Juke Box
Root
Total : 003
Mark
Name
MP3
MP3 + PHOTO
PHOTO
Instructions
Move
Return
Enter
Menu
Exit
Prev/Next Page

FIG. 12

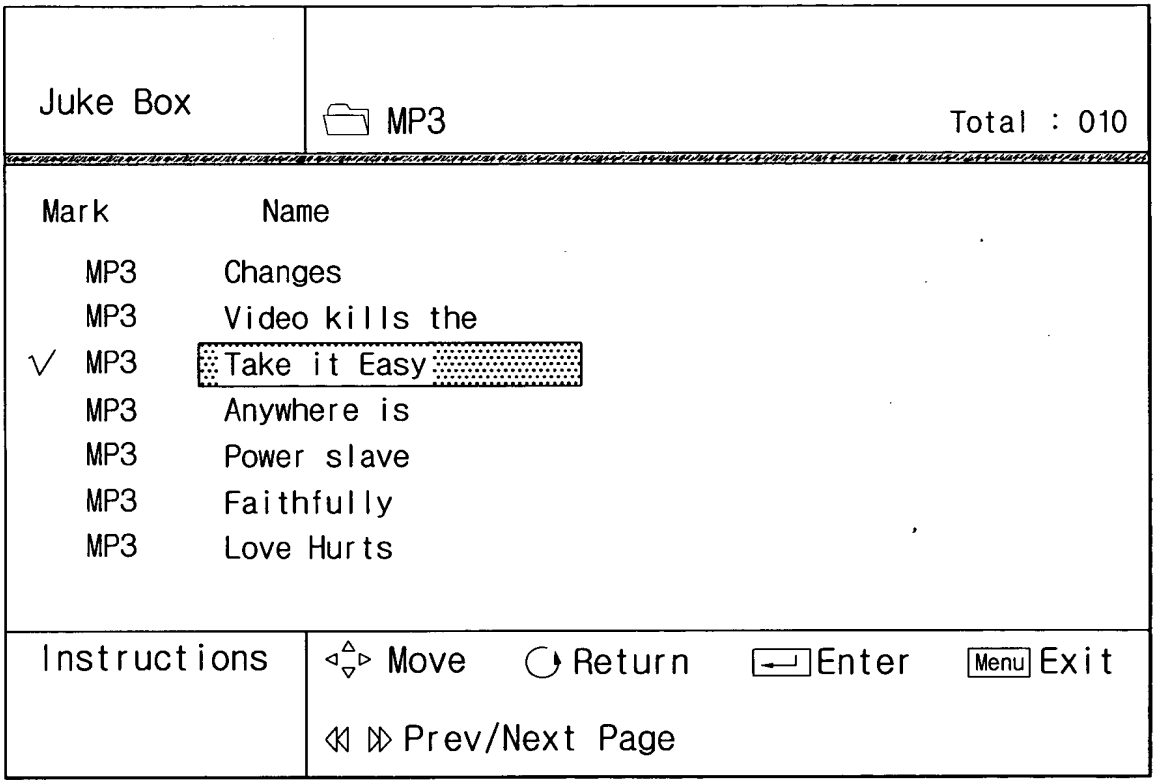

Juke Box
MP3
Total : 010
Mark
Name
MP3 Changes
MP3 Video kills the
√ MP3 Take it Easy
MP3 Anywhere is
MP3 Power slave
MP3 Faithfully
MP3 Love Hurts
Instructions
Move
Return
Enter
Menu Exit
Prev/Next Page

FIG. 13

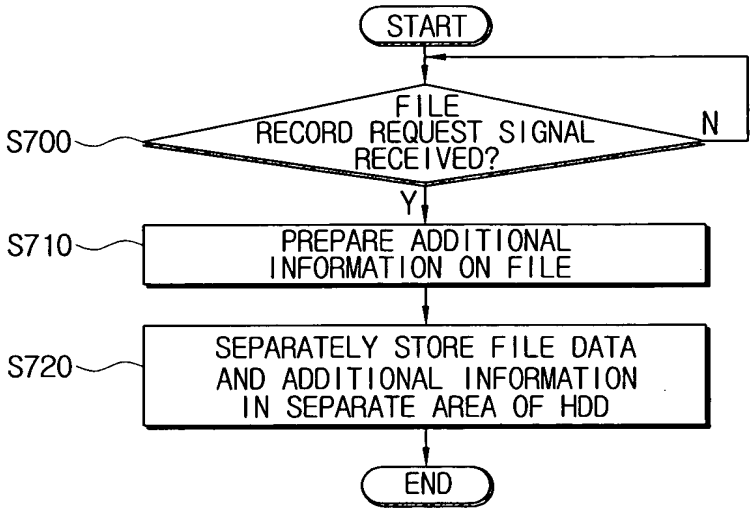

START
S700
FILE RECORD REQUEST SIGNAL RECEIVED?
N
Y
S710
PREPARE ADDITIONAL INFORMATION ON FILE
S720
SEPARATELY STORE FILE DATA AND ADDITIONAL INFORMATION IN SEPARATE AREA OF HDD
END

FIG. 14

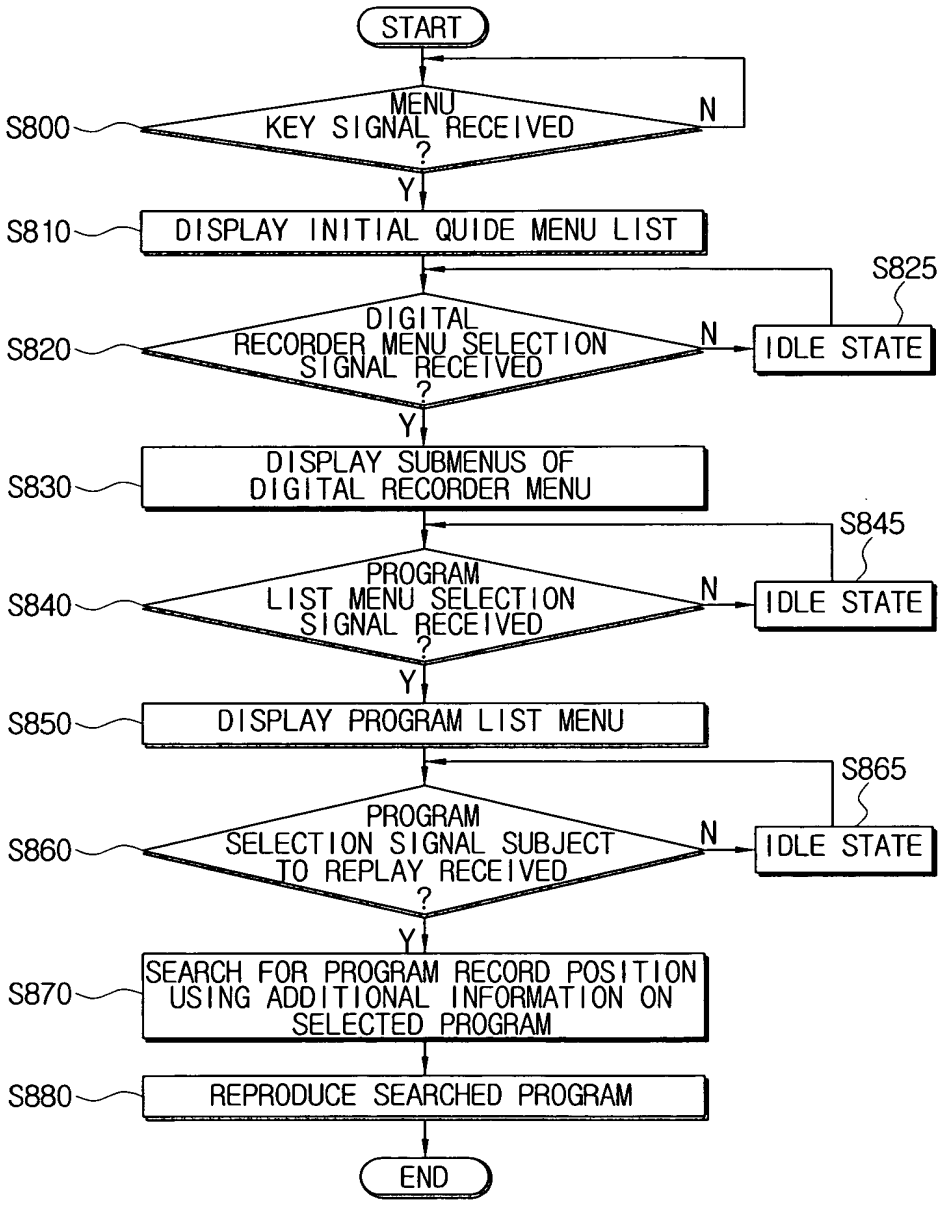

START
S800
MENU KEY SIGNAL RECEIVED ?
N
Y
S810
DISPLAY INITIAL QUIDE MENU LIST
S825
S820
DIGITAL RECORDER MENU SELECTION SIGNAL RECEIVED ?
N
IDLE STATE
Y
S830
DISPLAY SUBMENUS OF DIGITAL RECORDER MENU
S845
S840
PROGRAM LIST MENU SELECTION SIGNAL RECEIVED ?
N
IDLE STATE
Y
S850
DISPLAY PROGRAM LIST MENU
S865
S860
PROGRAM SELECTION SIGNAL SUBJECT TO REPLAY RECEIVED ?
N
IDLE STATE
Y
S870
SEARCH FOR PROGRAM RECORD POSITION USING ADDITIONAL INFORMATION ON SELECTED PROGRAM
S880
REPRODUCE SEARCHED PROGRAM
END

FIG. 15

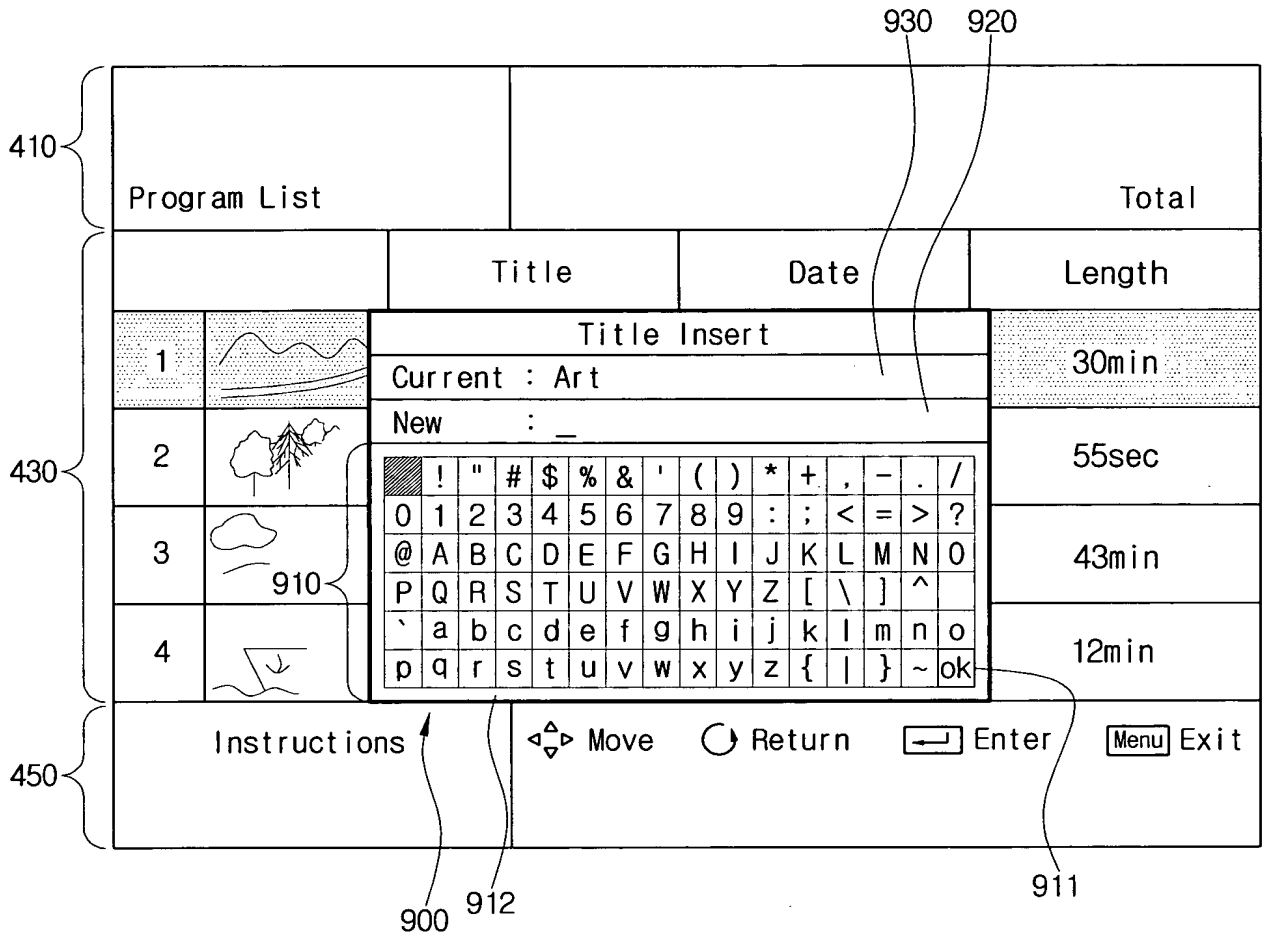

930
920
410
Program List
Total
Title
Date
Length
1
30min
Title Insert
Current : Art
New : _
2
55sec
430
3
910
43min
4
12min
! " # $ % & ' ( ) * + , - . /
0 1 2 3 4 5 6 7 8 9 : ; < = > ?
@ A B C D E F G H I J K L M N O
P Q R S T U V W X Y Z [\ ] ^
` a b c d e f g h i j k l m n o
p q r s t u v w x y z { | } ~ ok
Instructions
Move
Return
Enter
Menu Exit
450
900
912
911

FIG. 16

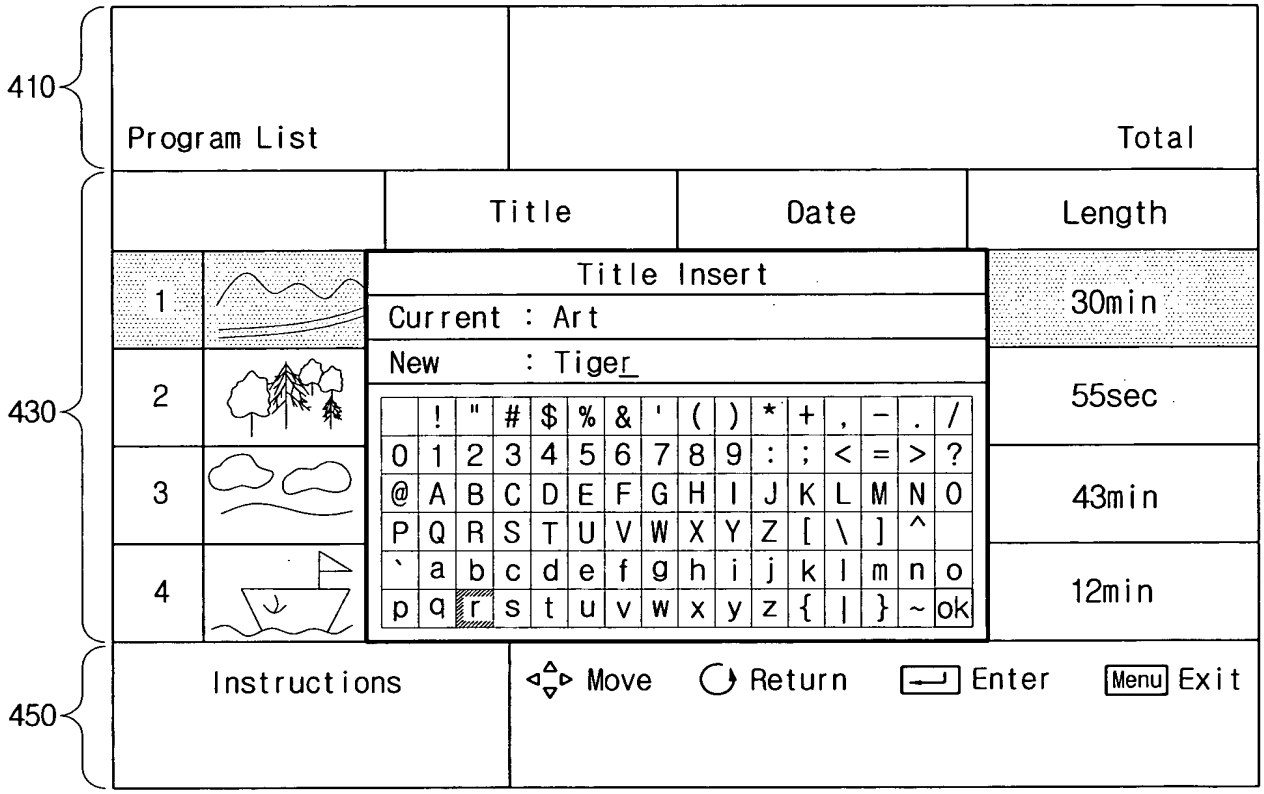

410
Program List
Total
Title
Date
Length
1
2
3
4
Title Insert
Current : Art
New : Tiger
30min
55sec
43min
12min
430
Instructions
Move
Return
Enter
Menu Exit
450

FIG. 17

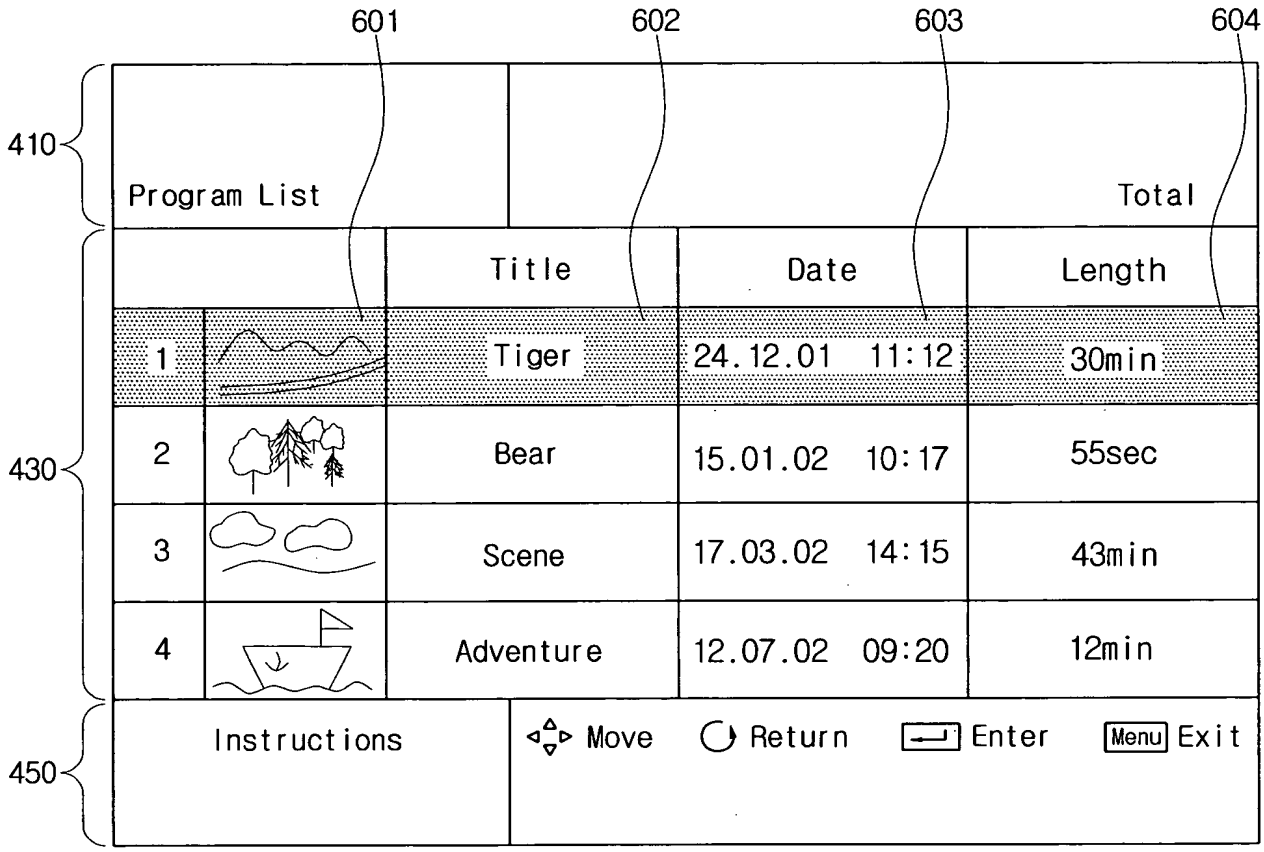

601
602
603
604
410
Program List
Total
Title
Date
Length
1
Tiger
24.12.01 11:12
30min
430
2
Bear
15.01.02 10:17
55sec
3
Scene
17.03.02 14:15
43min
4
Adventure
12.07.02 09:20
12min
450
Instructions
Move
Return
Enter
Menu
Exit

FIG. 18

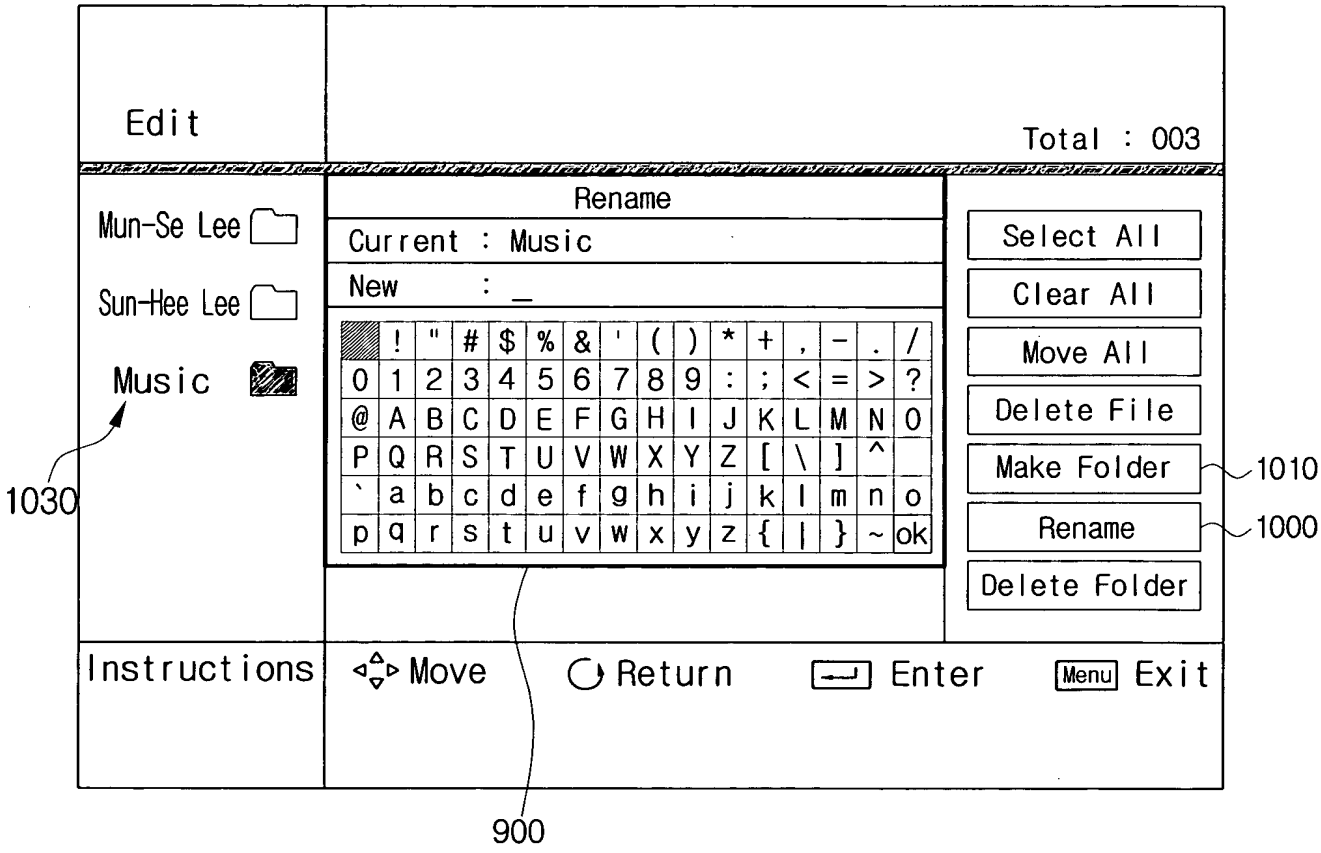

Edit
Total : 003
Mun-Se Lee
Sun-Hee Lee
Music
1030
Rename
Current : Music
New : _
! " # $ % & ' ( ) * + , - . /
0 1 2 3 4 5 6 7 8 9 : ; < = > ?
@ A B C D E F G H I J K L M N O
P Q R S T U V W X Y Z [\ ] ^
` a b c d e f g h i j k l m n o
p q r s t u v w x y z { | } ~ ok
900
Select All
Clear All
Move All
Delete File
Make Folder
1010
Rename
1000
Delete Folder
Instructions
Move
Return
Enter
Menu Exit

FIG. 19

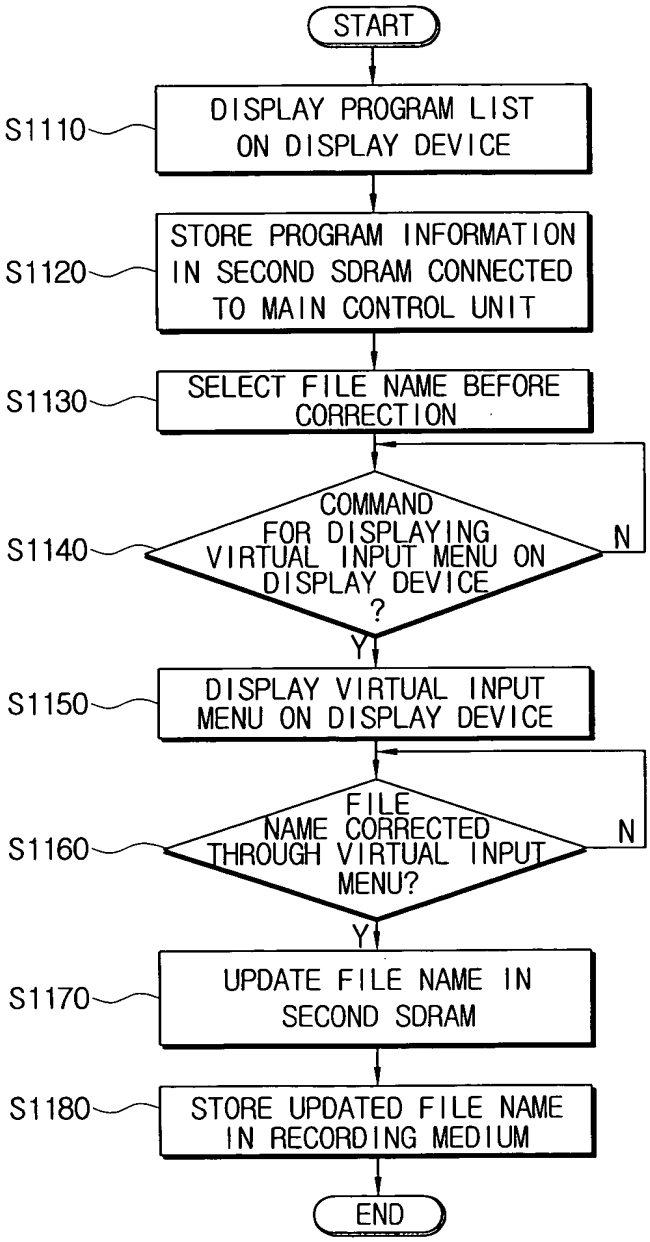

START
S1110
DISPLAY PROGRAM LIST ON DISPLAY DEVICE
S1120
STORE PROGRAM INFORMATION IN SECOND SDRAM CONNECTED TO MAIN CONTROL UNIT
S1130
SELECT FILE NAME BEFORE CORRECTION
S1140
COMMAND FOR DISPLAYING VIRTUAL INPUT MENU ON DISPLAY DEVICE ?
N
Y
S1150
DISPLAY VIRTUAL INPUT MENU ON DISPLAY DEVICE
S1160
FILE NAME CORRECTED THROUGH VIRTUAL INPUT MENU?
N
Y
S1170
UPDATE FILE NAME IN SECOND SDRAM
S1180
STORE UPDATED FILE NAME IN RECORDING MEDIUM
END

FIG. 20

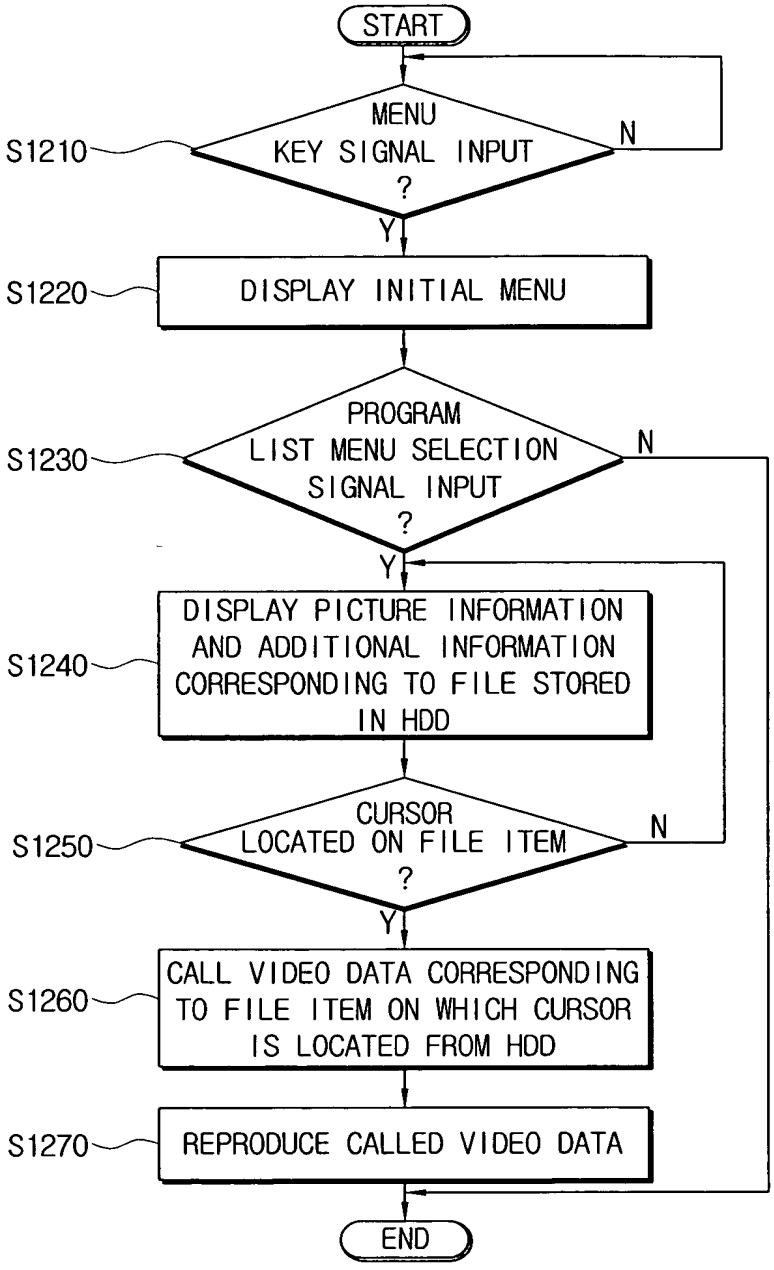

START
S1210
MENU KEY SIGNAL INPUT ?
N
Y
S1220
DISPLAY INITIAL MENU
S1230
PROGRAM LIST MENU SELECTION SIGNAL INPUT ?
N
Y
S1240
DISPLAY PICTURE INFORMATION AND ADDITIONAL INFORMATION CORRESPONDING TO FILE STORED IN HDD
S1250
CURSOR LOCATED ON FILE ITEM ?
N
Y
S1260
CALL VIDEO DATA CORRESPONDING TO FILE ITEM ON WHICH CURSOR IS LOCATED FROM HDD
S1270
REPRODUCE CALLED VIDEO DATA
END

FIG. 21

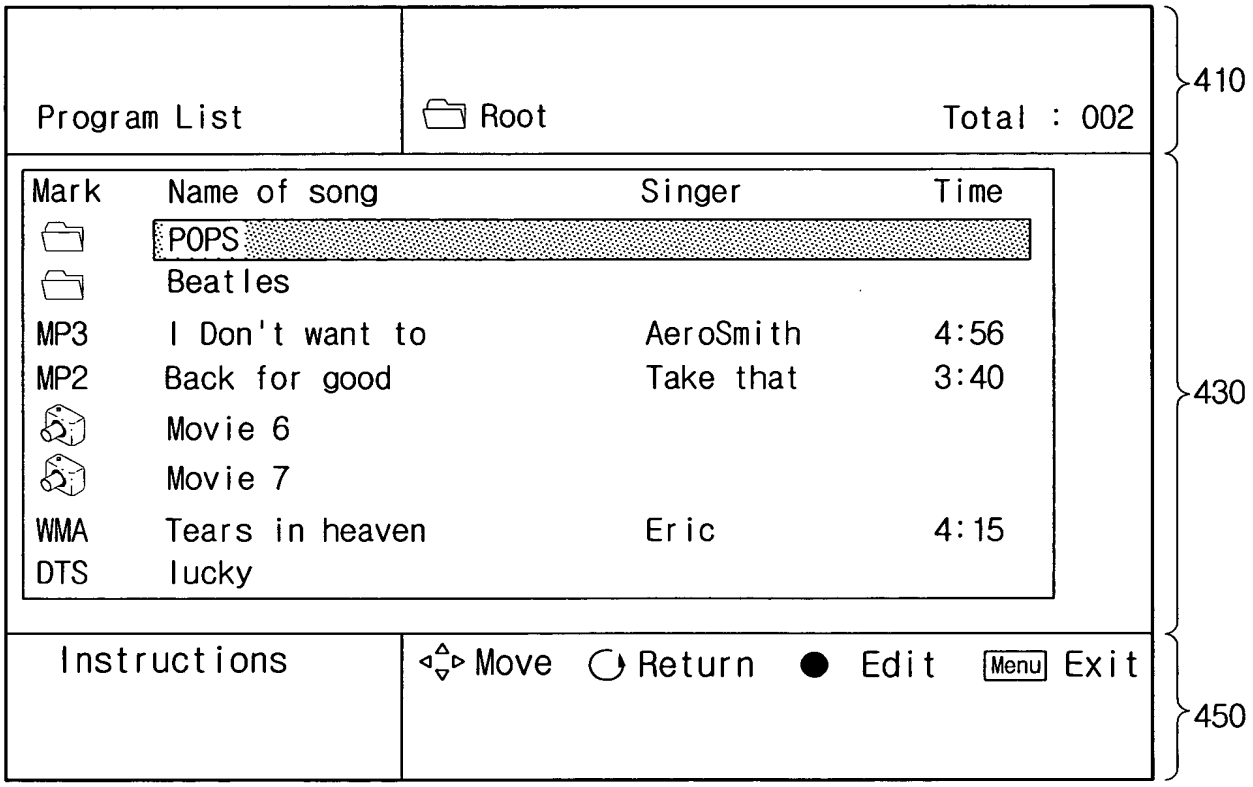

Program List
Root
Total : 002
410
Mark
Name of song
Singer
Time
POPS
Beatles
MP3
I Don't want to
AeroSmith
4:56
MP2
Back for good
Take that
3:40
Movie 6
Movie 7
WMA
Tears in heaven
Eric
4:15
DTS
lucky
430
Instructions
Move
Return
Edit
Menu
Exit
450

FIG. 22

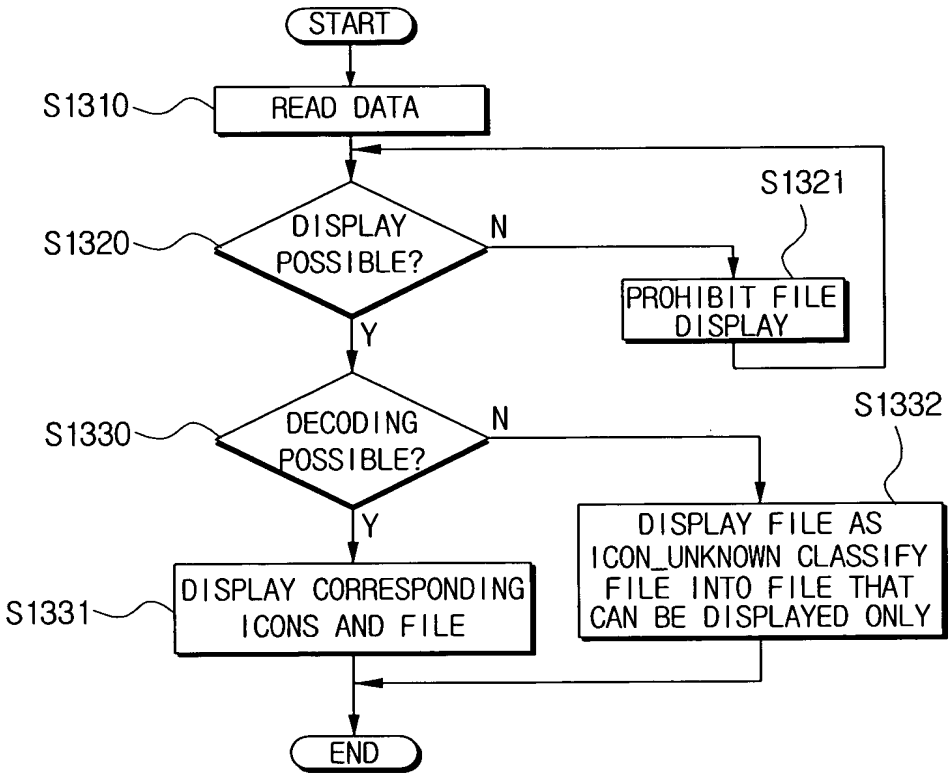

START
S1310
READ DATA
S1320
DISPLAY POSSIBLE?
N
S1321
PROHIBIT FILE DISPLAY
Y
S1330
DECODING POSSIBLE?
N
S1332
Y
DISPLAY FILE AS ICON_UNKNOWN CLASSIFY FILE INTO FILE THAT CAN BE DISPLAYED ONLY
S1331
DISPLAY CORRESPONDING ICONS AND FILE
END

FIG. 23

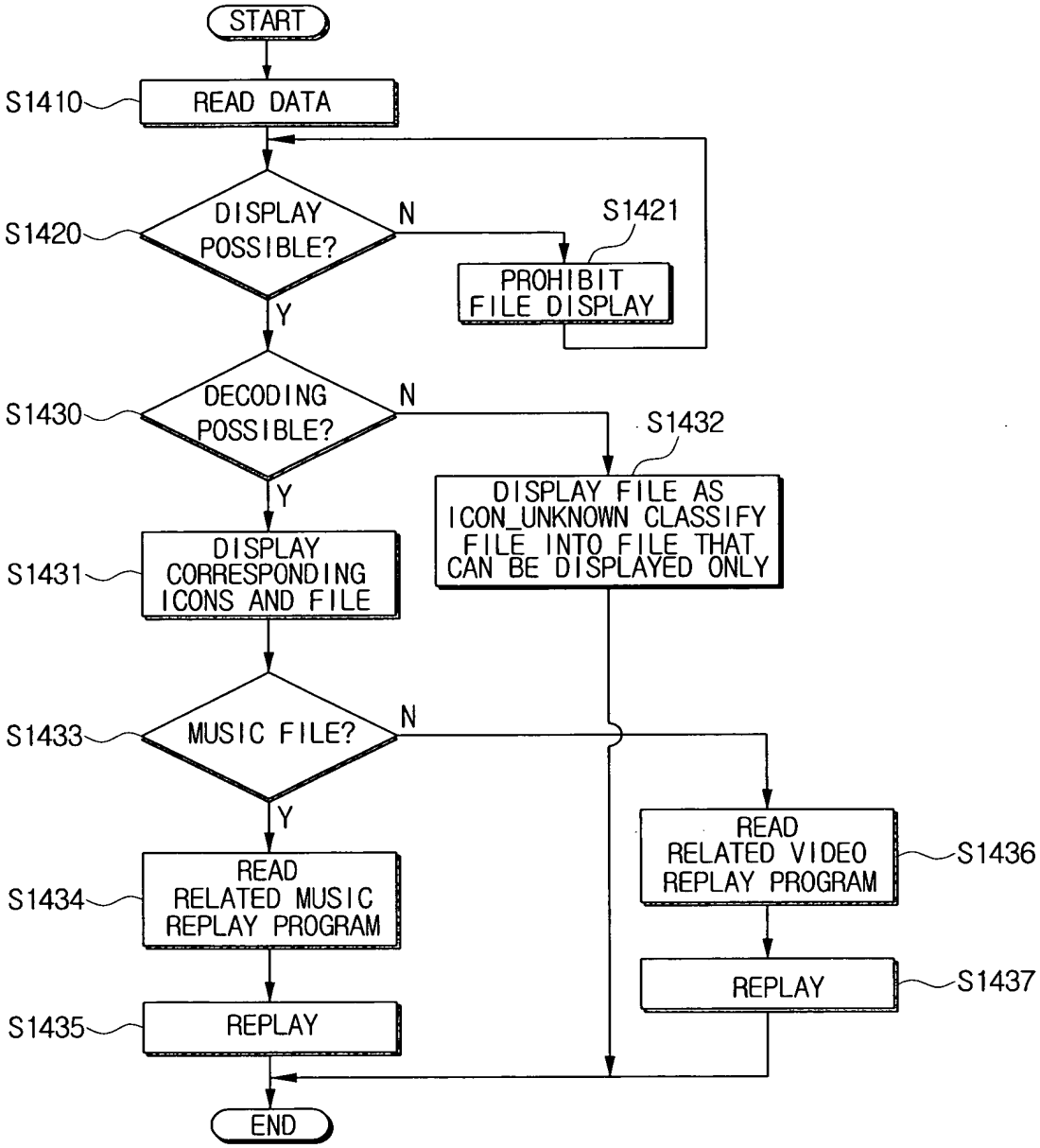

START
S1410
READ DATA
S1420
DISPLAY POSSIBLE?
N
S1421
PROHIBIT FILE DISPLAY
Y
S1430
DECODING POSSIBLE?
N
S1432
DISPLAY FILE AS ICON_UNKNOWN CLASSIFY FILE INTO FILE THAT CAN BE DISPLAYED ONLY
Y
S1431
DISPLAY CORRESPONDING ICONS AND FILE
S1433
MUSIC FILE?
N
Y
S1434
READ RELATED MUSIC REPLAY PROGRAM
S1435
REPLAY
READ RELATED VIDEO REPLAY PROGRAM
S1436
REPLAY
S1437
END

FIG. 24

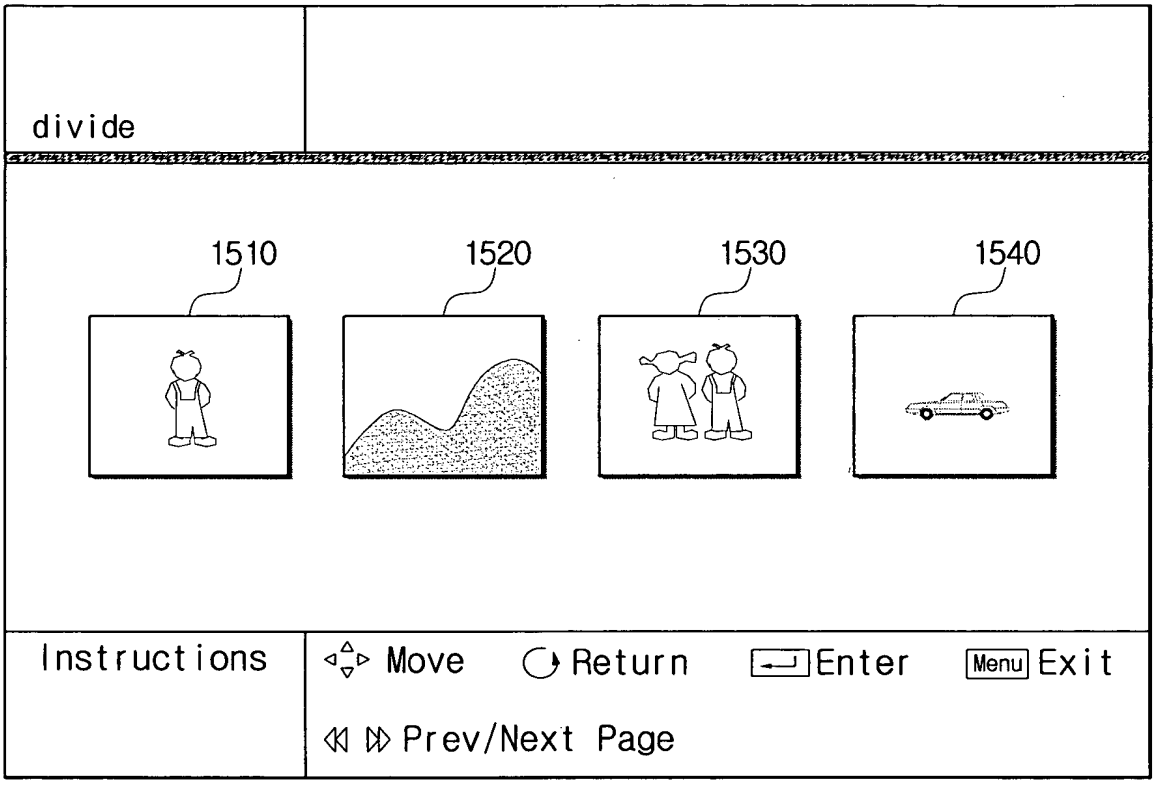

divide
1510
1520
1530
1540
Instructions
Move
Return
Enter
Menu
Exit
Prev/Next Page

FIG. 25

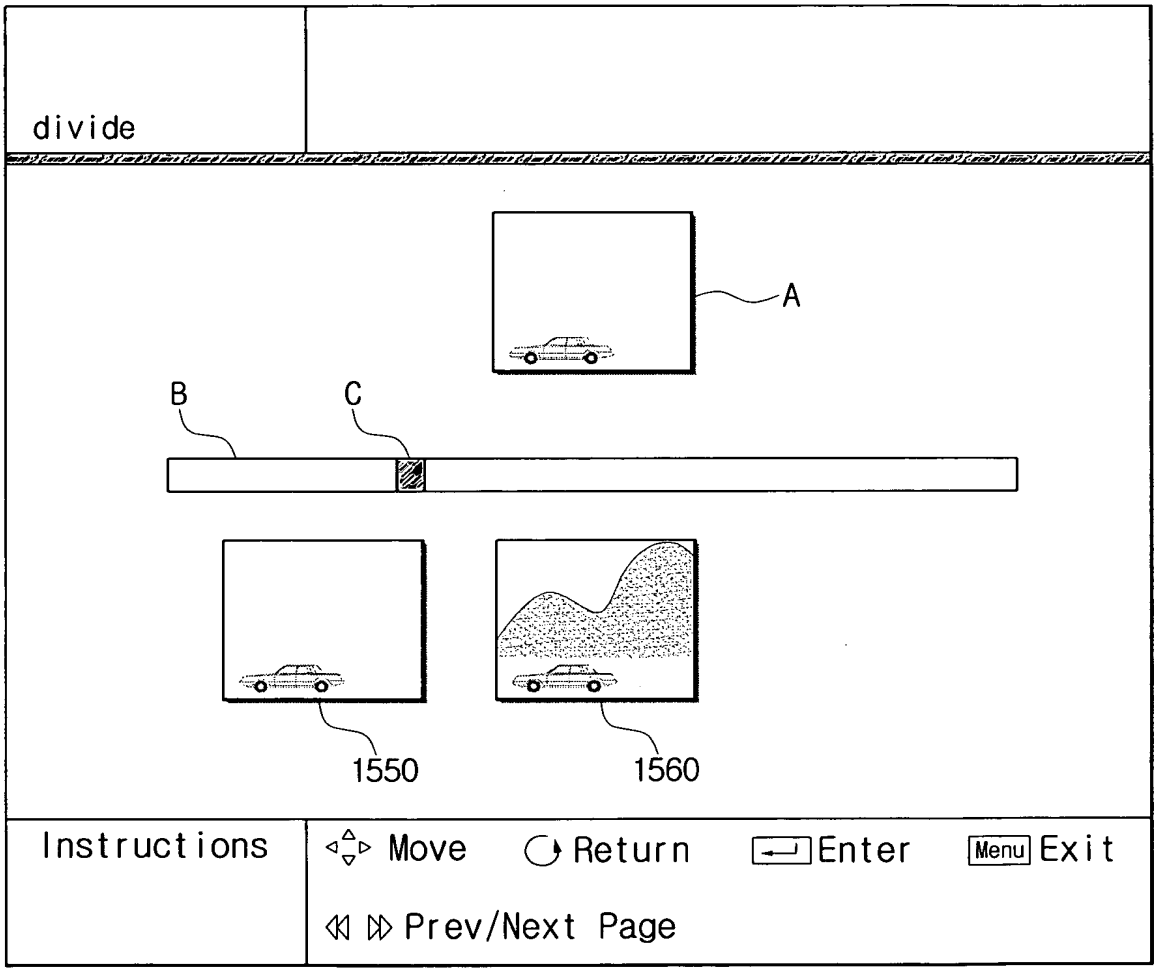

divide
A
B
C
1550
1560
Instructions
Move
Return
Enter
Menu
Exit
Prev/Next Page

FIG. 26

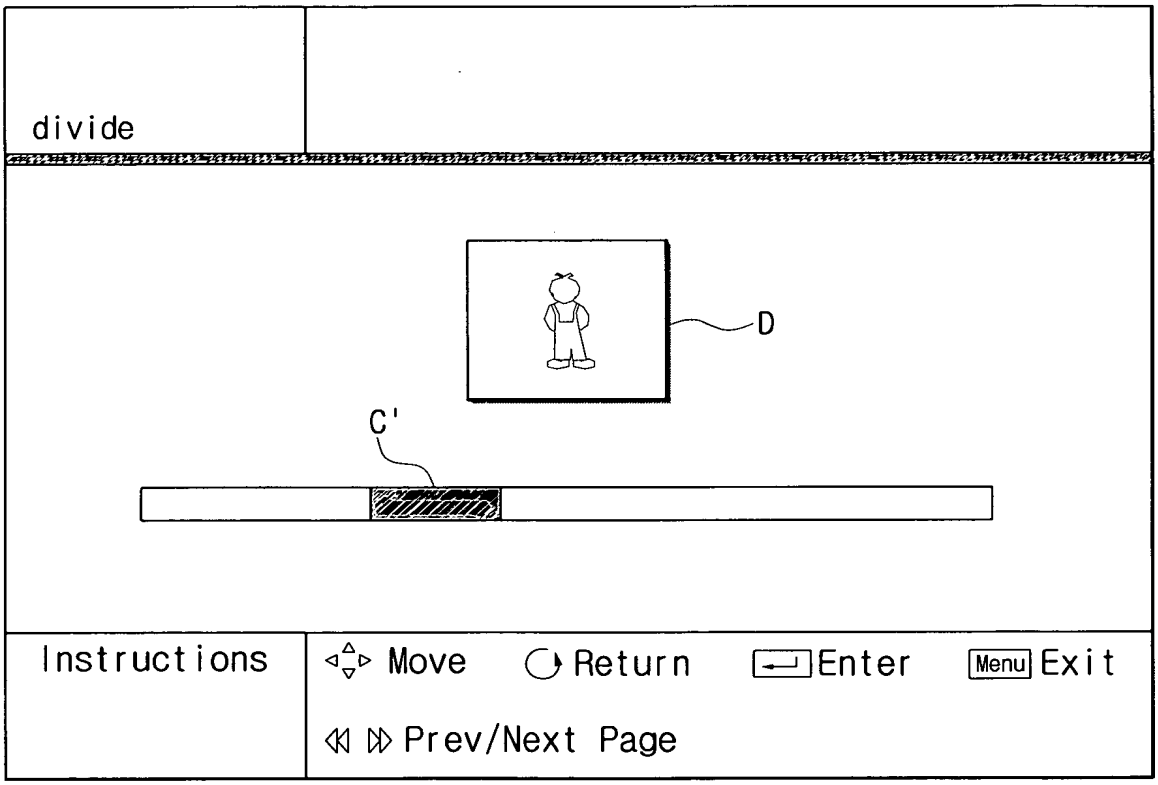

divide
D
C'
Instructions
Move
Return
Enter
Menu
Exit
Prev/Next Page

FIG. 27

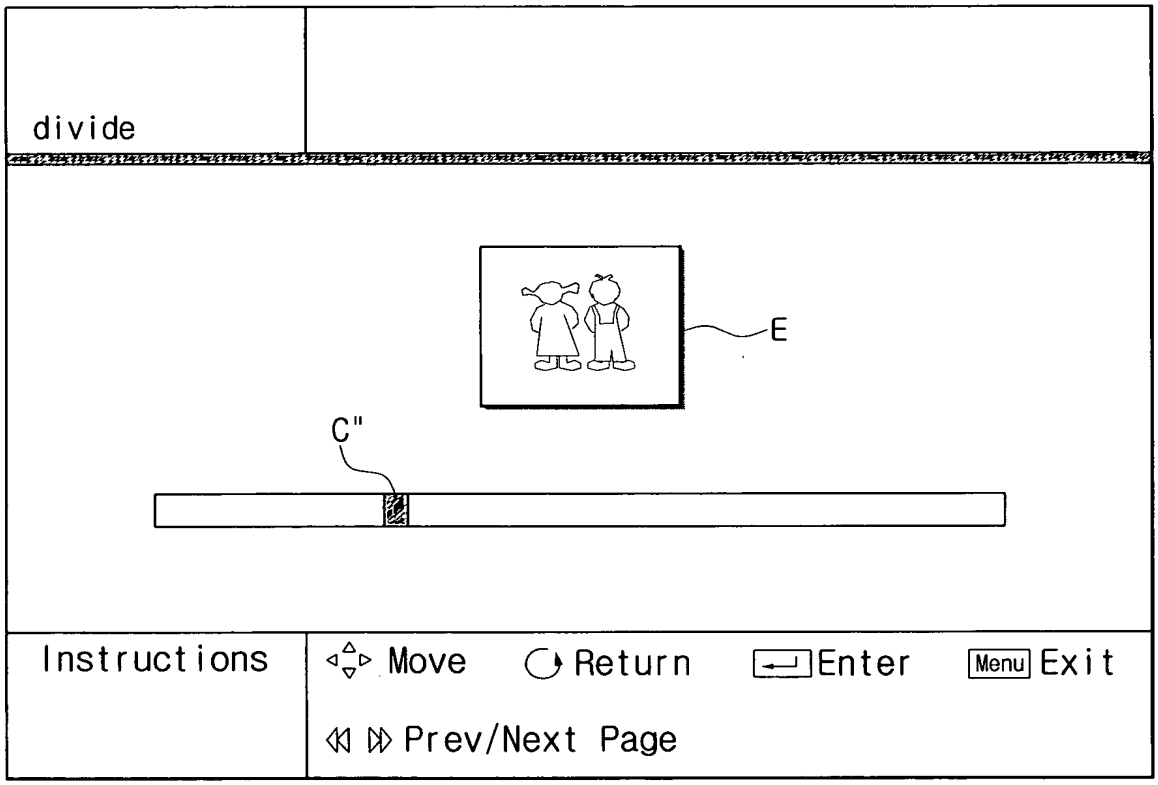

divide
E
C"
Instructions
Move
Return
Enter
Menu
Exit
Prev/Next Page

FIG. 28

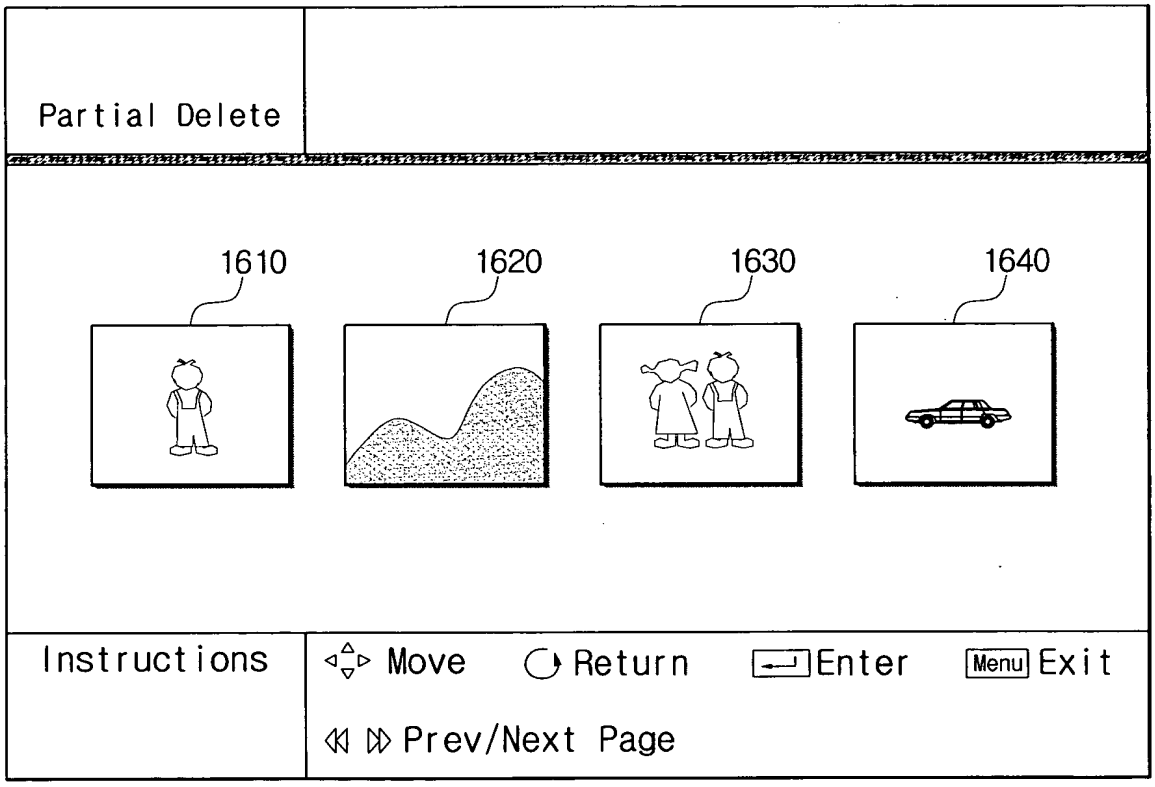

Partial Delete
1610
1620
1630
1640
Instructions
Move
Return
Enter
Menu Exit
Prev/Next Page

FIG. 29

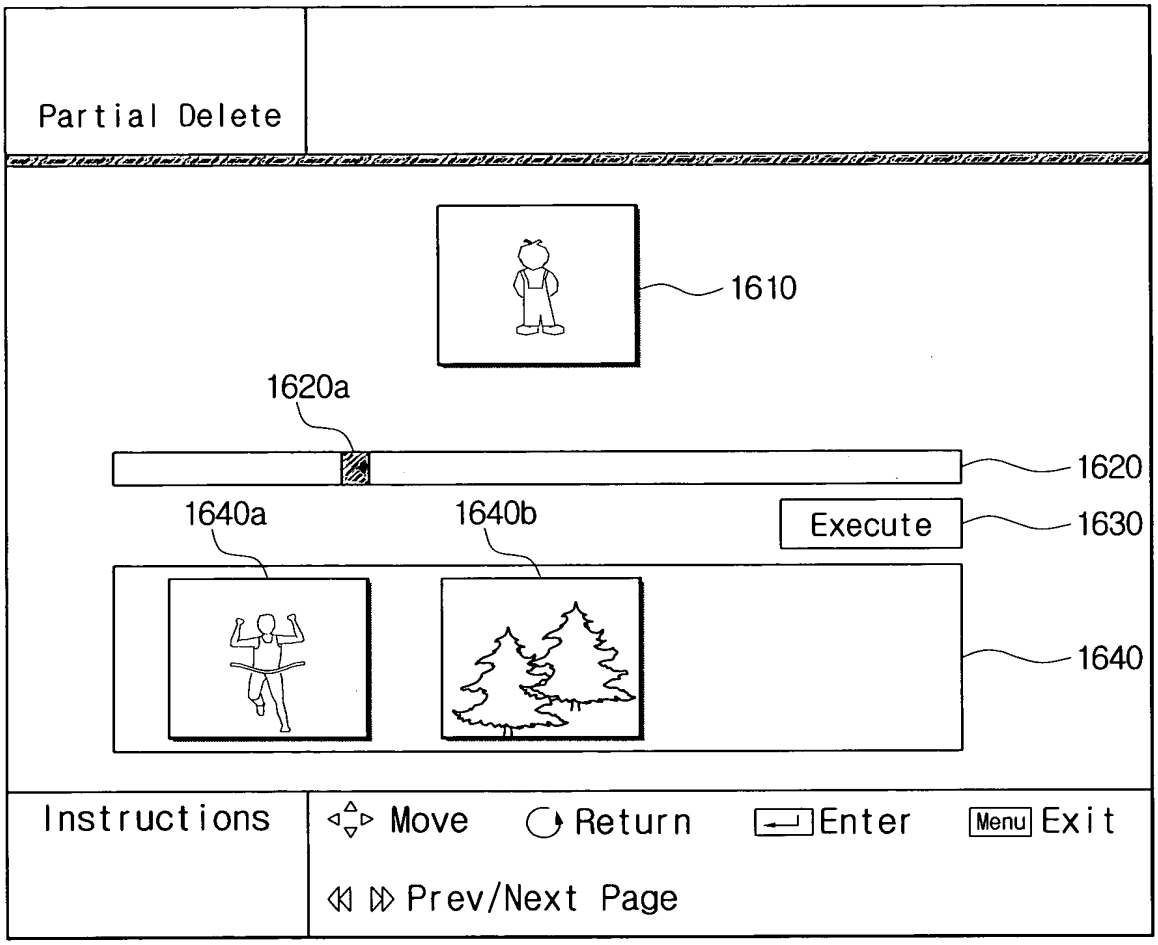

Partial Delete
1610
1620a
1620
1640a
1640b
Execute
1630
1640
Instructions
Move
Return
Enter
Menu Exit
Prev/Next Page

FIG. 30

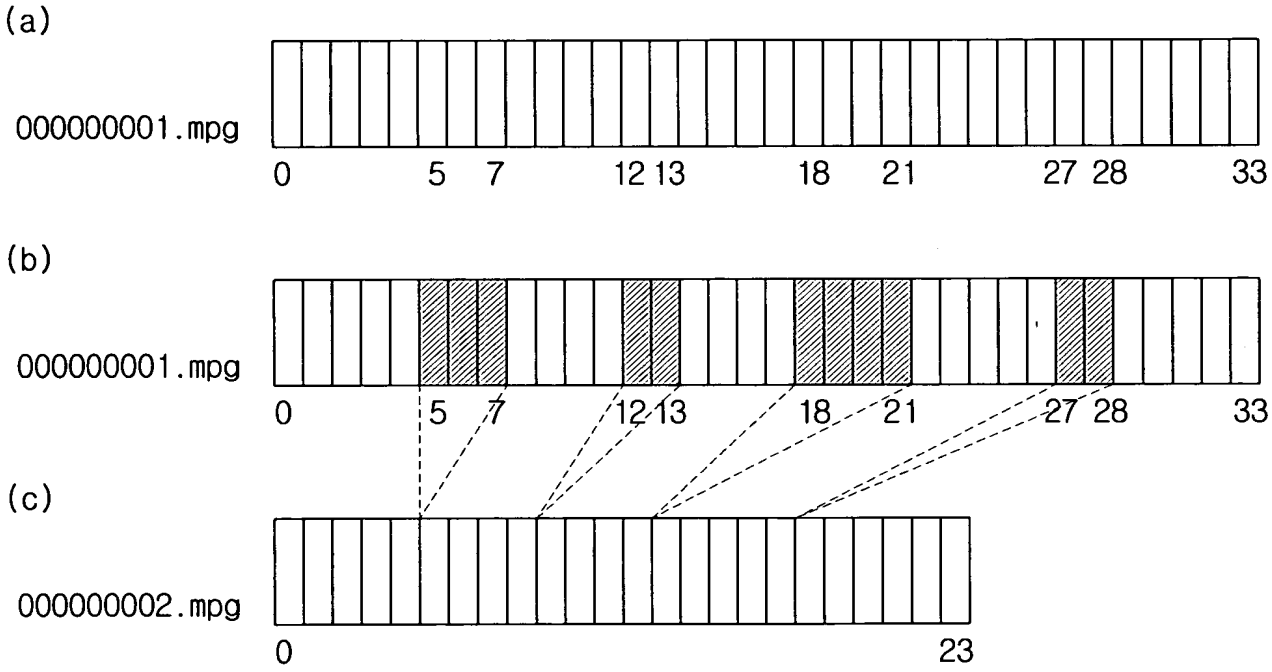

(a)
000000001.mpg
0
5
7
12
13
18
21
27
28
33
(b)
000000001.mpg
0
5
7
12
13
18
21
27
28
33
(c)
000000002.mpg
0
23

FIG. 31

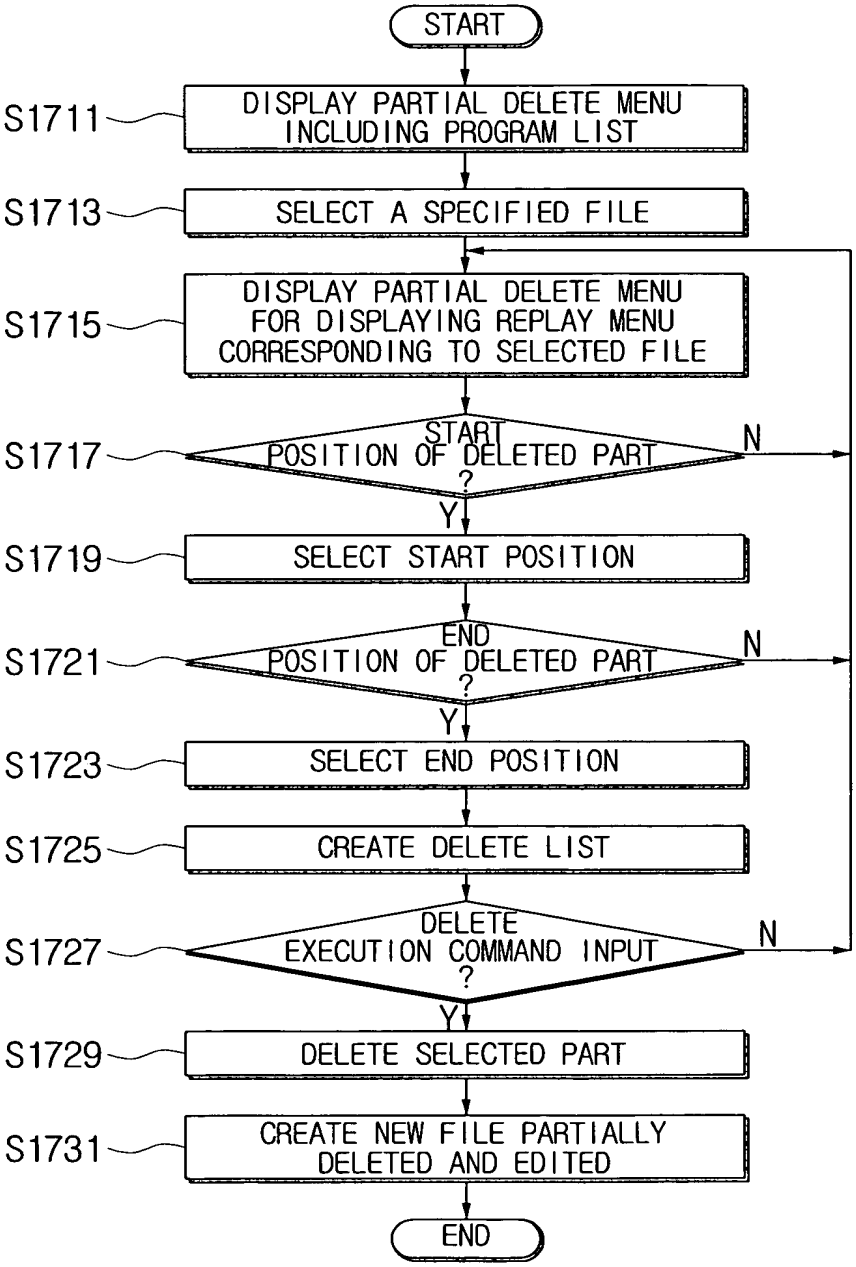

START
S1711
DISPLAY PARTIAL DELETE MENU INCLUDING PROGRAM LIST
S1713
SELECT A SPECIFIED FILE
S1715
DISPLAY PARTIAL DELETE MENU FOR DISPLAYING REPLAY MENU CORRESPONDING TO SELECTED FILE
S1717
START POSITION OF DELETED PART ?
N
Y
S1719
SELECT START POSITION
S1721
END POSITION OF DELETED PART ?
N
Y
S1723
SELECT END POSITION
S1725
CREATE DELETE LIST
S1727
DELETE EXECUTION COMMAND INPUT ?
N
Y
S1729
DELETE SELECTED PART
S1731
CREATE NEW FILE PARTIALLY DELETED AND EDITED
END

FIG. 32

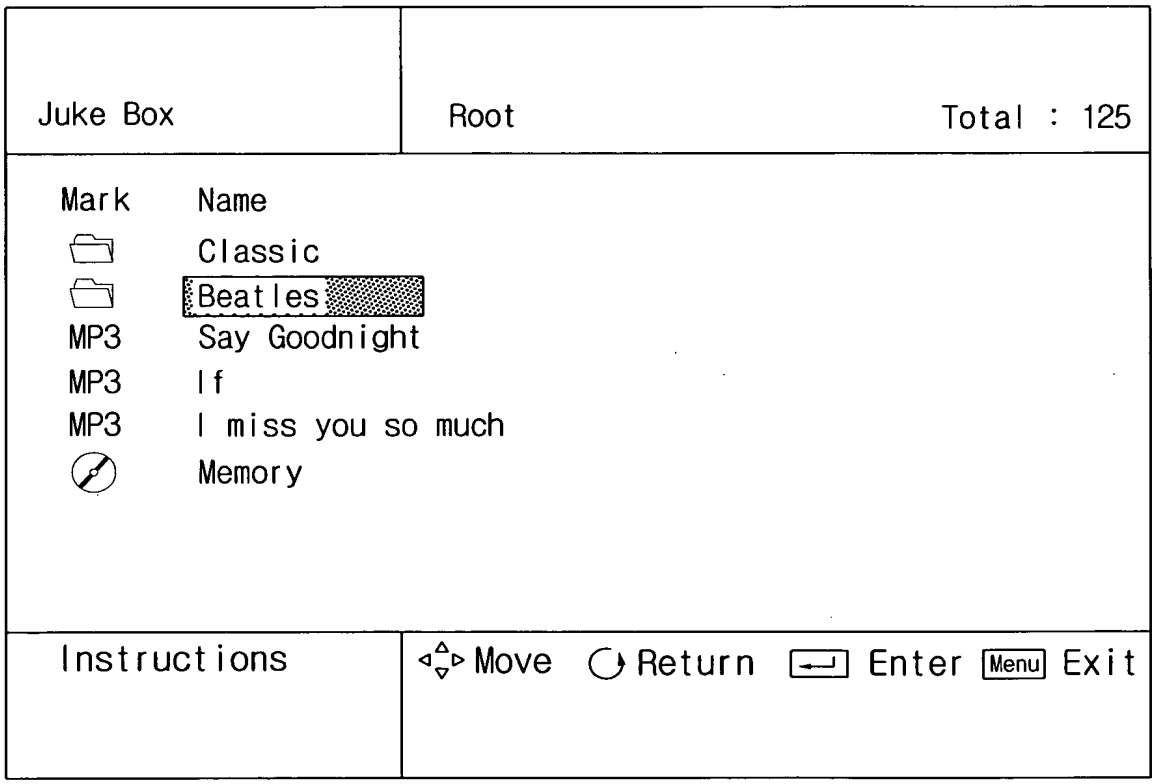

Juke Box
Root
Total : 125
Mark
Name
Classic
Beatles
MP3
Say Goodnight
MP3
If
MP3
I miss you so much
Memory
Instructions
Move
Return
Enter
Menu
Exit

FIG. 33

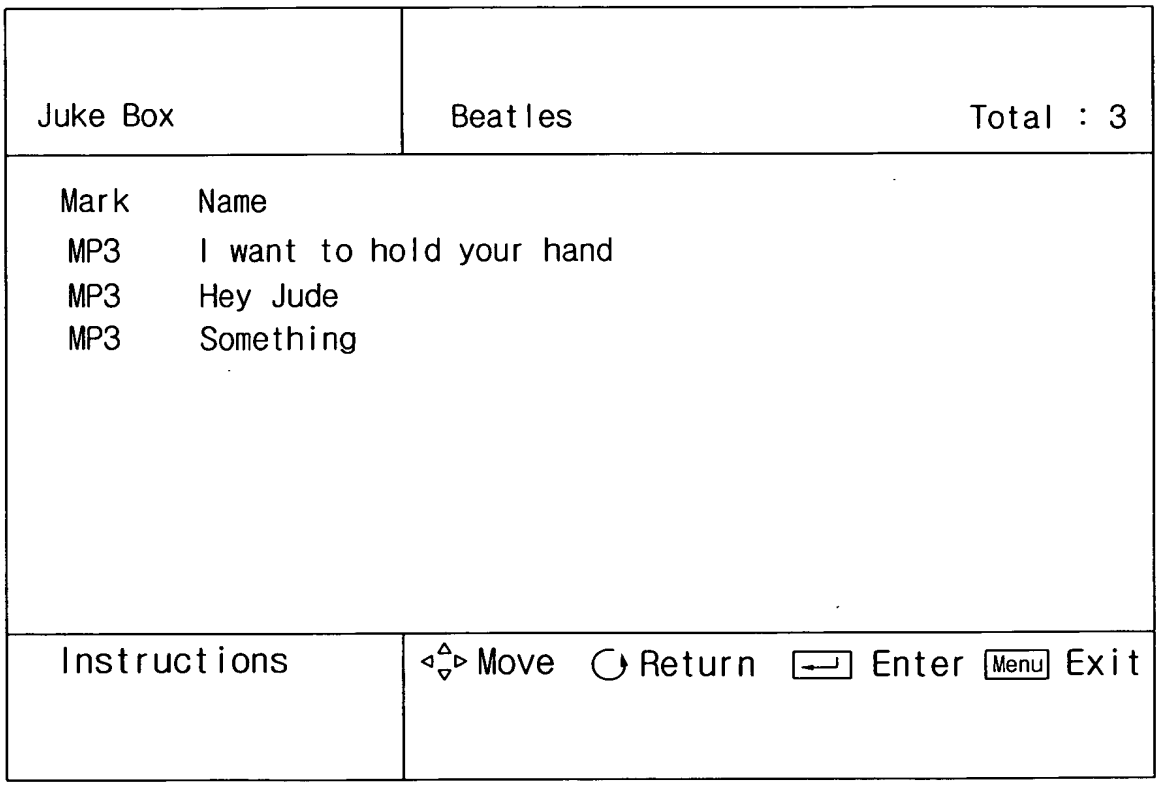

Juke Box
Beatles
Total : 3
Mark
Name
MP3
I want to hold your hand
MP3
Hey Jude
MP3
Something
Instructions
Move
Return
Enter
Menu
Exit

FIG. 34

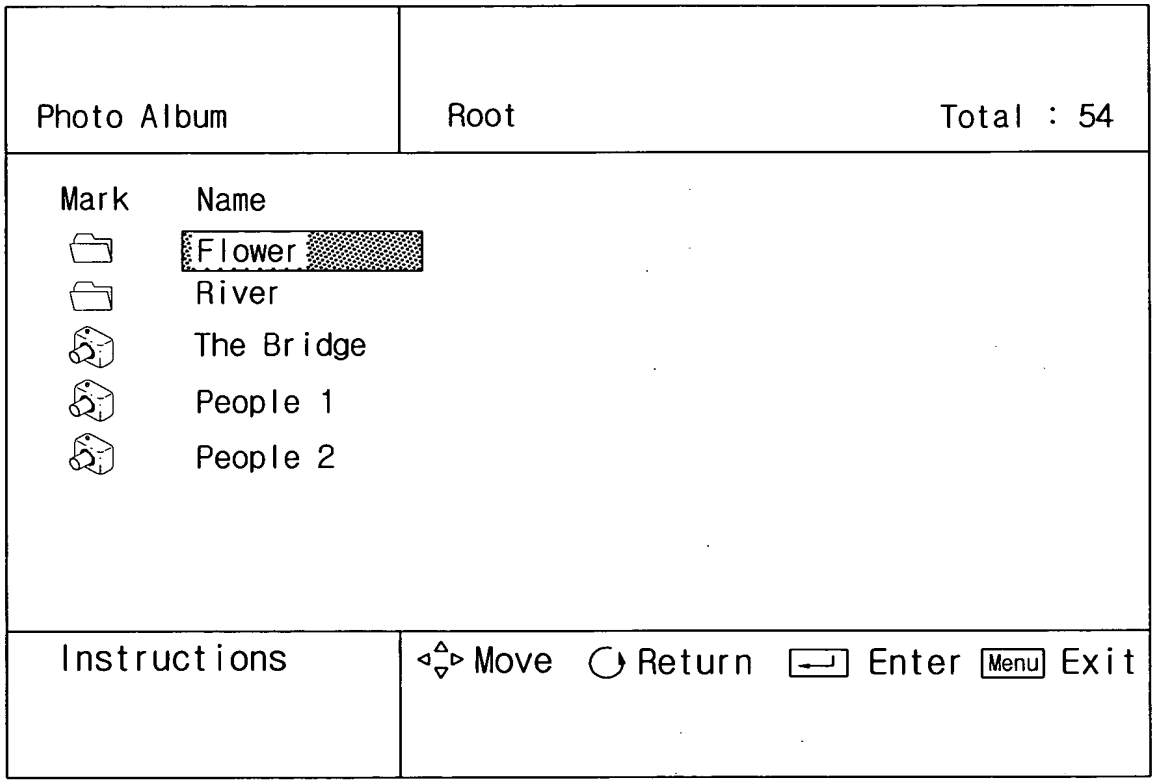


Photo Album
Root
Total : 54
Mark
Name
Flower
River
The Bridge
People 1
People 2
Instructions
Move
Return
Enter
Menu
Exit

FIG. 35

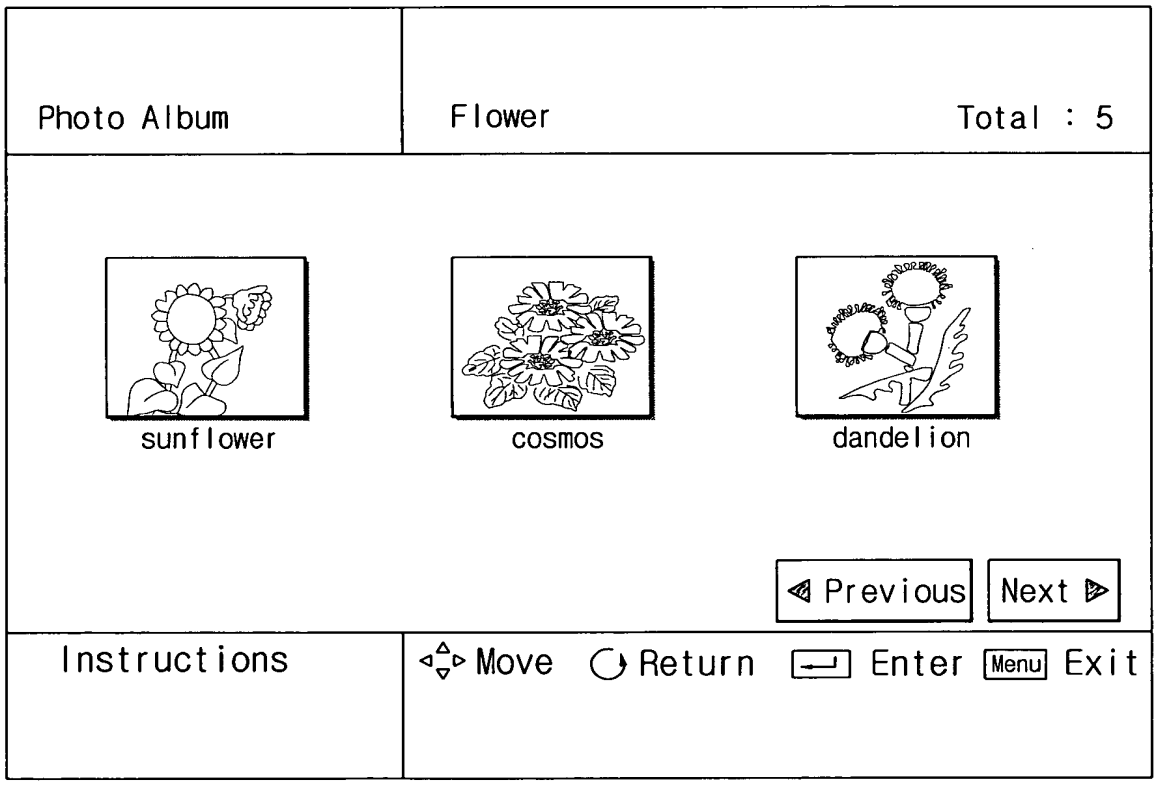


Photo Album
Flower
Total : 5
sunflower
cosmos
dandelion
Previous
Next
Instructions
Move
Return
Enter
Menu
Exit

FIG. 36

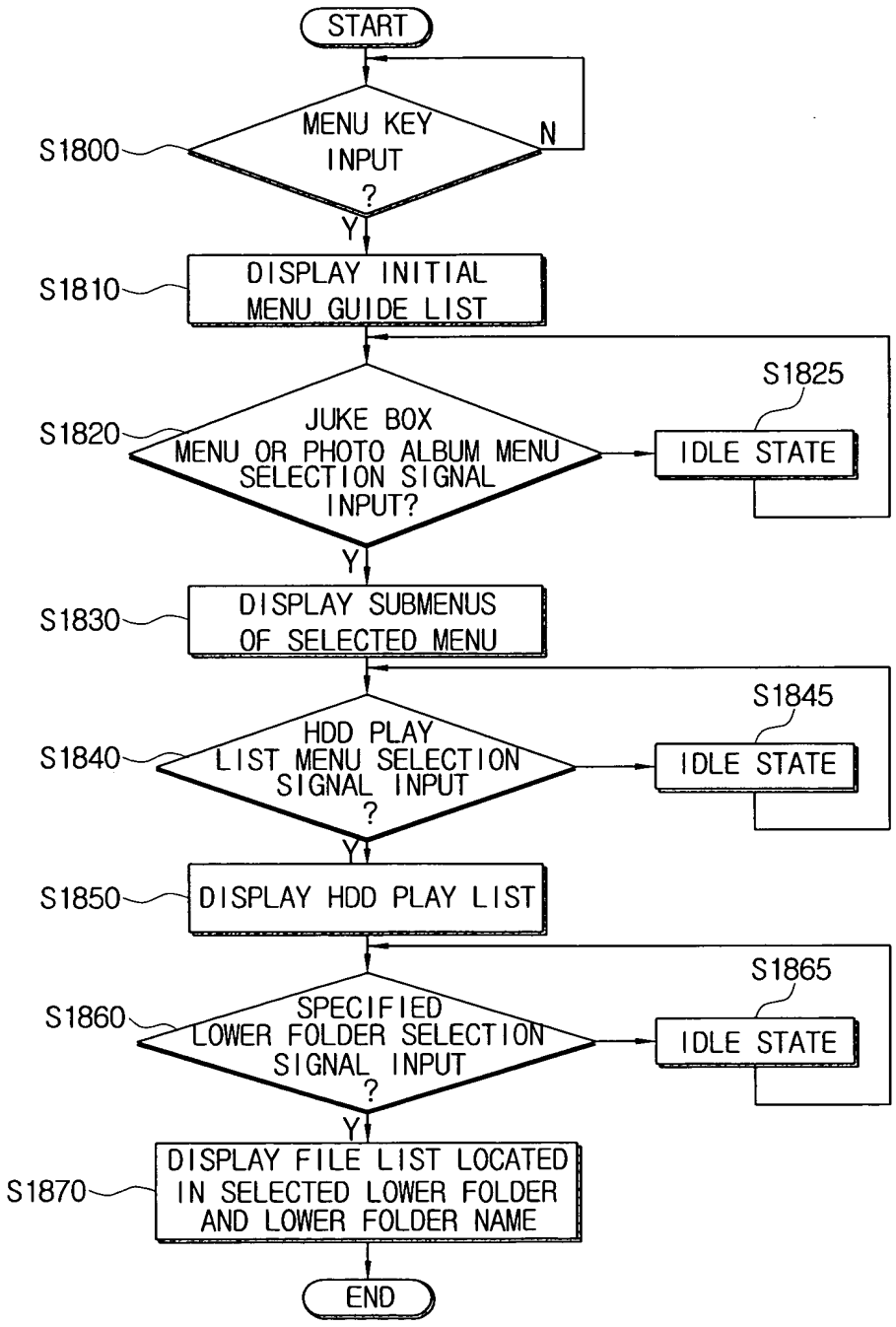

START
S1800
MENU KEY INPUT ?
N
Y
S1810
DISPLAY INITIAL MENU GUIDE LIST
S1820
JUKE BOX MENU OR PHOTO ALBUM MENU SELECTION SIGNAL INPUT?
S1825
IDLE STATE
Y
S1830
DISPLAY SUBMENUS OF SELECTED MENU
S1840
HDD PLAY LIST MENU SELECTION SIGNAL INPUT ?
S1845
IDLE STATE
Y
S1850
DISPLAY HDD PLAY LIST
S1860
SPECIFIED LOWER FOLDER SELECTION SIGNAL INPUT ?
S1865
IDLE STATE
Y
S1870
DISPLAY FILE LIST LOCATED IN SELECTED LOWER FOLDER AND LOWER FOLDER NAME
END

FIG. 37

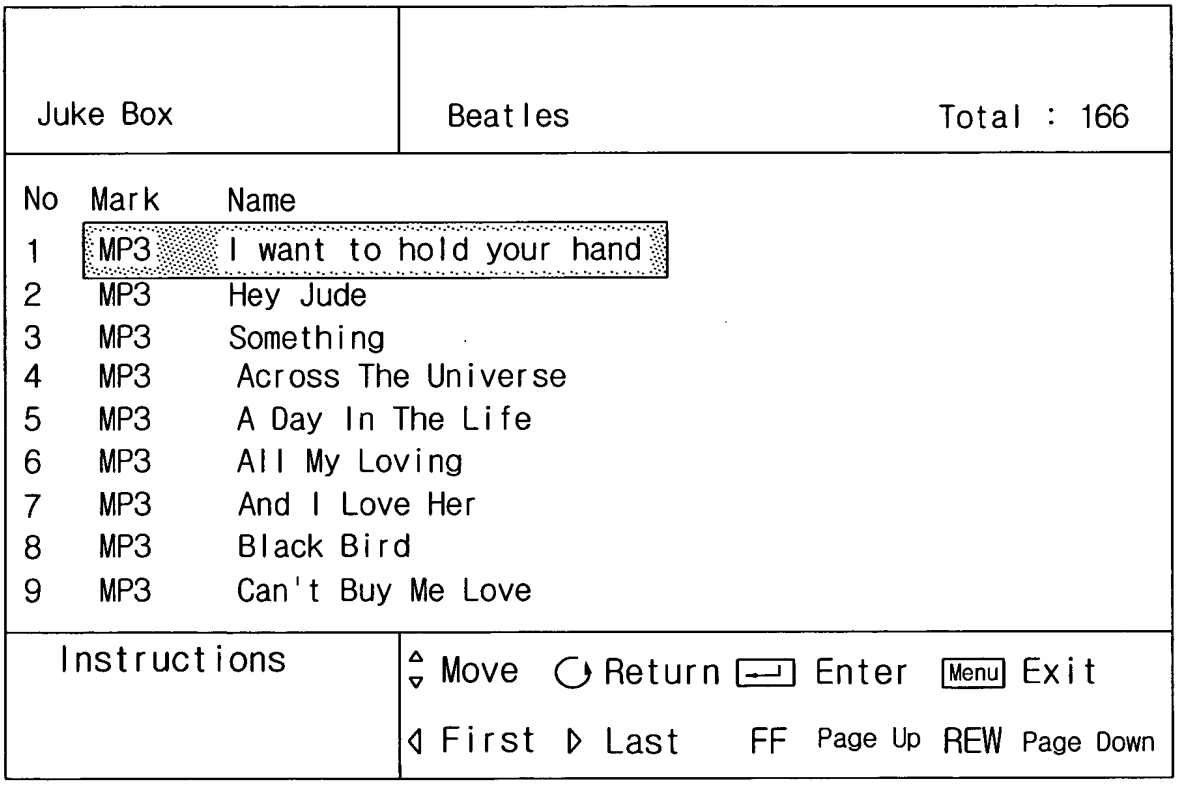

Juke Box
Beatles
Total : 166
No Mark Name
1 MP3 I want to hold your hand
2 MP3 Hey Jude
3 MP3 Something
4 MP3 Across The Universe
5 MP3 A Day In The Life
6 MP3 All My Loving
7 MP3 And I Love Her
8 MP3 Black Bird
9 MP3 Can't Buy Me Love
Instructions
Move
Return
Enter
Menu
Exit
First
Last
FF
Page Up
REW
Page Down

FIG. 38

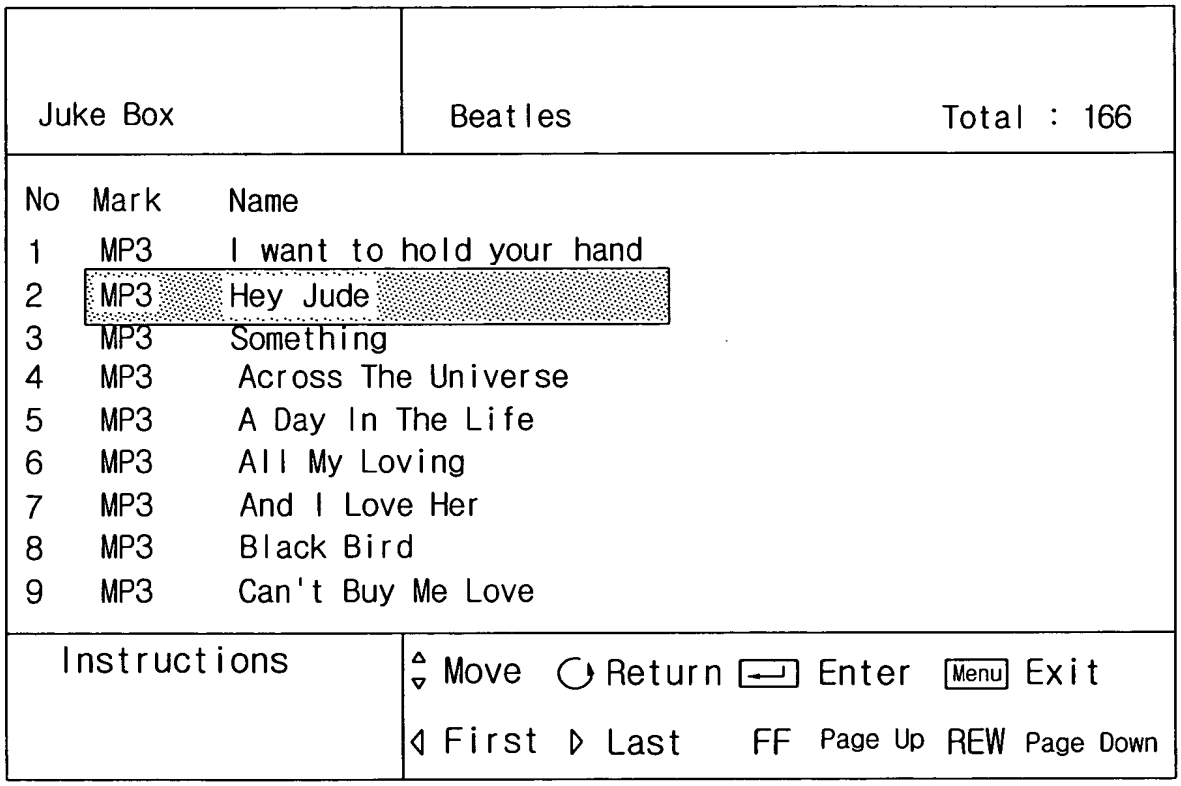

Juke Box
Beatles
Total : 166
No Mark Name
1 MP3 I want to hold your hand
2 MP3 Hey Jude
3 MP3 Something
4 MP3 Across The Universe
5 MP3 A Day In The Life
6 MP3 All My Loving
7 MP3 And I Love Her
8 MP3 Black Bird
9 MP3 Can't Buy Me Love
Instructions
Move
Return
Enter
Menu
Exit
First
Last
FF
Page Up
REW
Page Down

FIG. 39

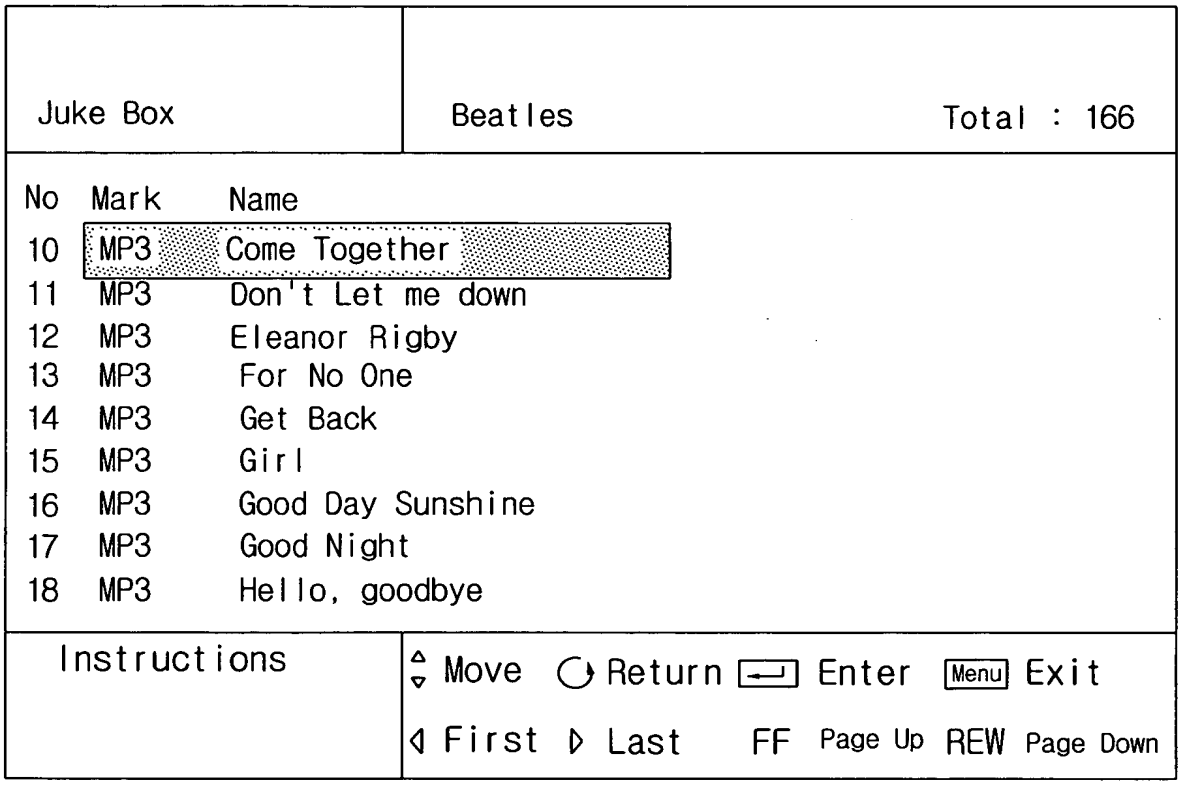

Juke Box
Beatles
Total : 166
No Mark Name
10 MP3 Come Together
11 MP3 Don't Let me down
12 MP3 Eleanor Rigby
13 MP3 For No One
14 MP3 Get Back
15 MP3 Girl
16 MP3 Good Day Sunshine
17 MP3 Good Night
18 MP3 Hello, goodbye
Instructions
Move
Return
Enter
Menu
Exit
First
Last
FF
Page Up
REW
Page Down

FIG. 40

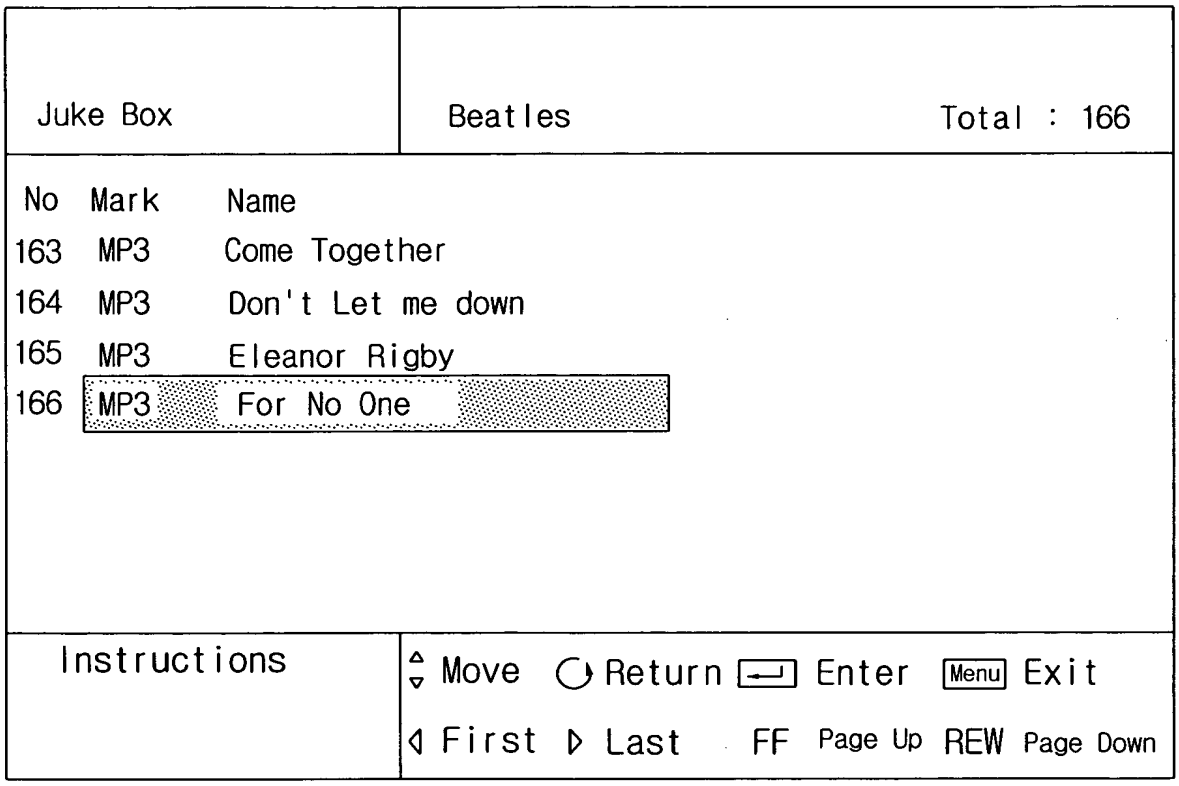

Juke Box
Beatles
Total : 166
No Mark Name
163 MP3 Come Together
164 MP3 Don't Let me down
165 MP3 Eleanor Rigby
166 MP3 For No One
Instructions
Move
Return
Enter
Menu
Exit
First
Last
FF
Page Up
REW
Page Down

FIG. 41

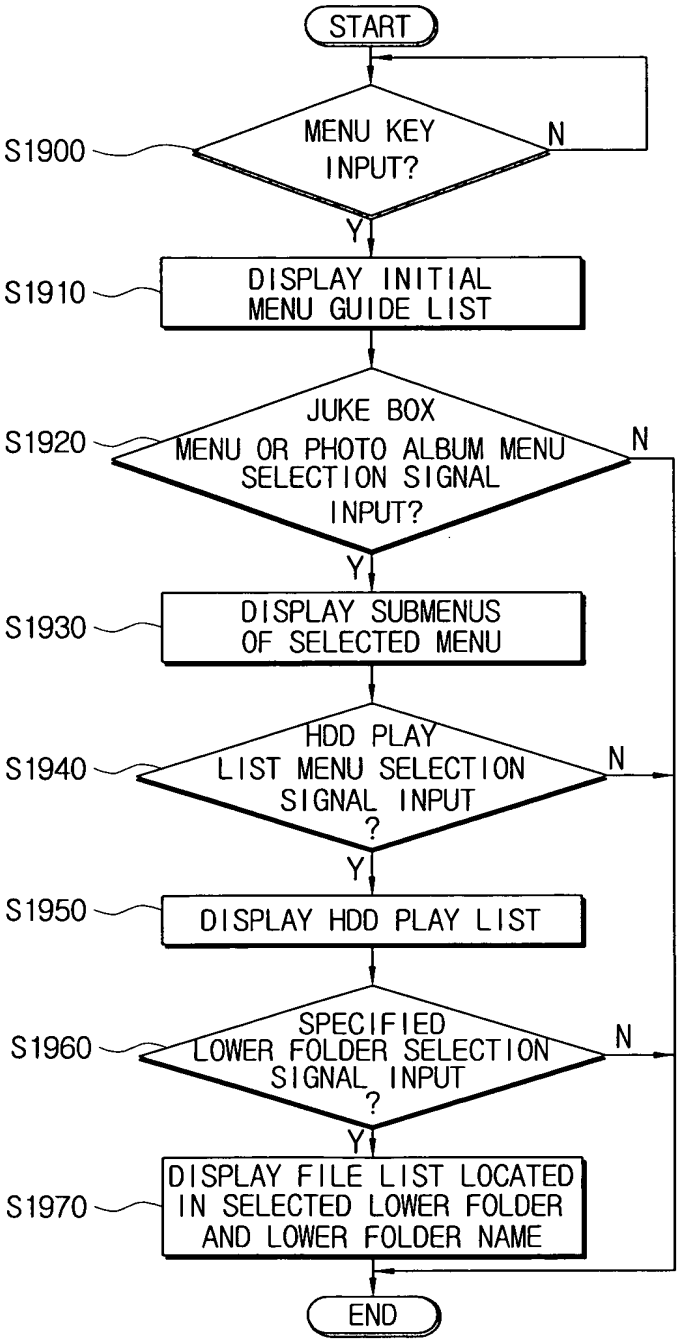

START
S1900
MENU KEY INPUT?
N
Y
S1910
DISPLAY INITIAL MENU GUIDE LIST
S1920
JUKE BOX MENU OR PHOTO ALBUM MENU SELECTION SIGNAL INPUT?
N
Y
S1930
DISPLAY SUBMENUS OF SELECTED MENU
S1940
HDD PLAY LIST MENU SELECTION SIGNAL INPUT ?
N
Y
S1950
DISPLAY HDD PLAY LIST
S1960
SPECIFIED LOWER FOLDER SELECTION SIGNAL INPUT ?
N
Y
S1970
DISPLAY FILE LIST LOCATED IN SELECTED LOWER FOLDER AND LOWER FOLDER NAME
END

FIG. 42

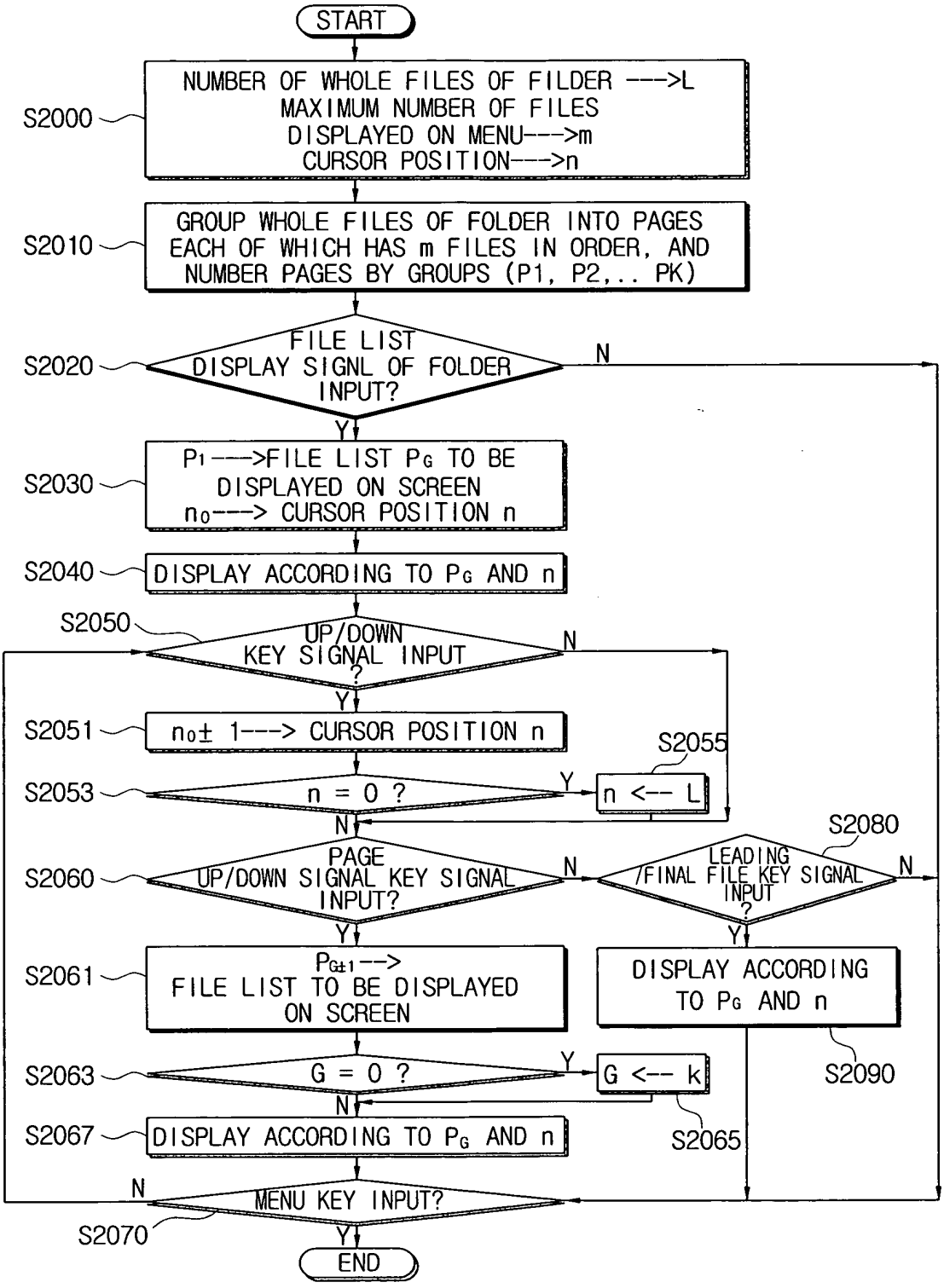

START
NUMBER OF WHOLE FILES OF FILDER --->L
MAXIMUM NUMBER OF FILES
DISPLAYED ON MENU--->m
CURSOR POSITION--->n
S2000
GROUP WHOLE FILES OF FOLDER INTO PAGES
EACH OF WHICH HAS m FILES IN ORDER, AND
NUMBER PAGES BY GROUPS (P1, P2,.. PK)
S2010
FILE LIST
DISPLAY SIGNL OF FOLDER
INPUT?
S2020
N
Y
P1 --->FILE LIST PG TO BE
DISPLAYED ON SCREEN
n0---> CURSOR POSITION n
S2030
DISPLAY ACCORDING TO PG AND n
S2040
S2050
UP/DOWN
KEY SIGNAL INPUT
?
N
Y
n0± 1---> CURSOR POSITION n
S2051
S2055
n = 0 ?
S2053
Y
n <-- L
N
S2080
PAGE
UP/DOWN SIGNAL KEY SIGNAL
INPUT?
S2060
N
LEADING
/FINAL FILE KEY SIGNAL
INPUT
?
N
Y
Y
PG±1-->
FILE LIST TO BE DISPLAYED
ON SCREEN
S2061
DISPLAY ACCORDING
TO PG AND n
S2090
G = 0 ?
S2063
Y
G <-- k
N
S2065
S2067
DISPLAY ACCORDING TO PG AND n
N
MENU KEY INPUT?
S2070
Y
END

FIG. 43

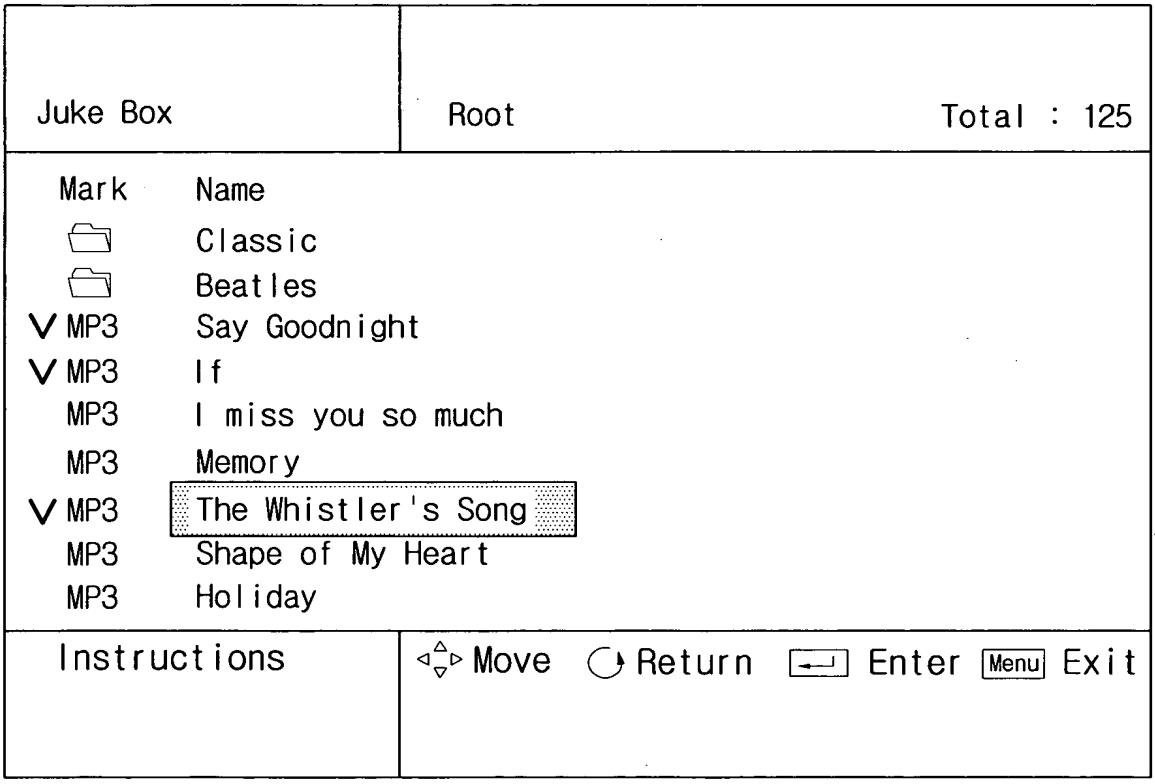

Juke Box
Root
Total : 125
Mark
Name
Classic
Beatles
MP3
Say Goodnight
MP3
If
MP3
I miss you so much
MP3
Memory
MP3
The Whistler's Song
MP3
Shape of My Heart
MP3
Holiday
Instructions
Move
Return
Enter
Menu
Exit

FIG. 44

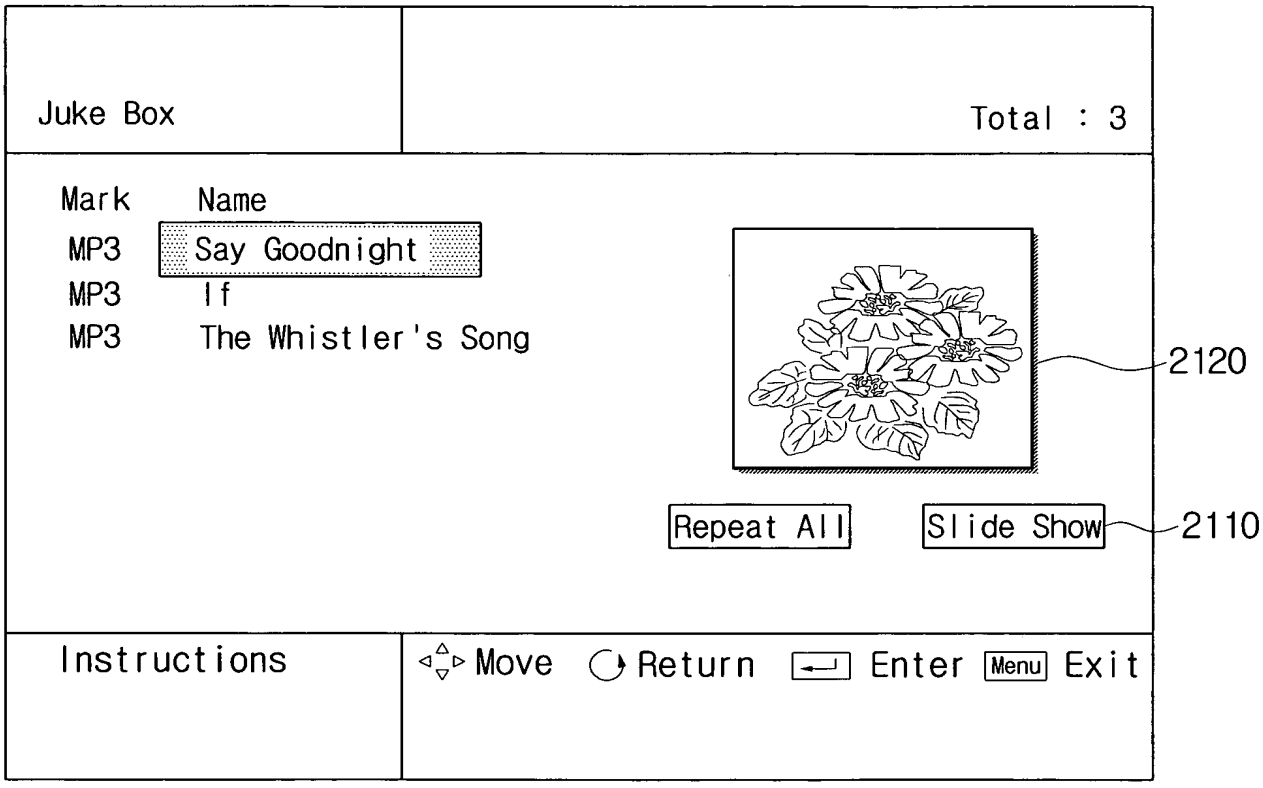

Juke Box
Total : 3
Mark
Name
MP3
Say Goodnight
MP3
If
MP3
The Whistler's Song
2120
Repeat All
Slide Show
2110
Instructions
Move
Return
Enter
Menu
Exit

FIG. 45

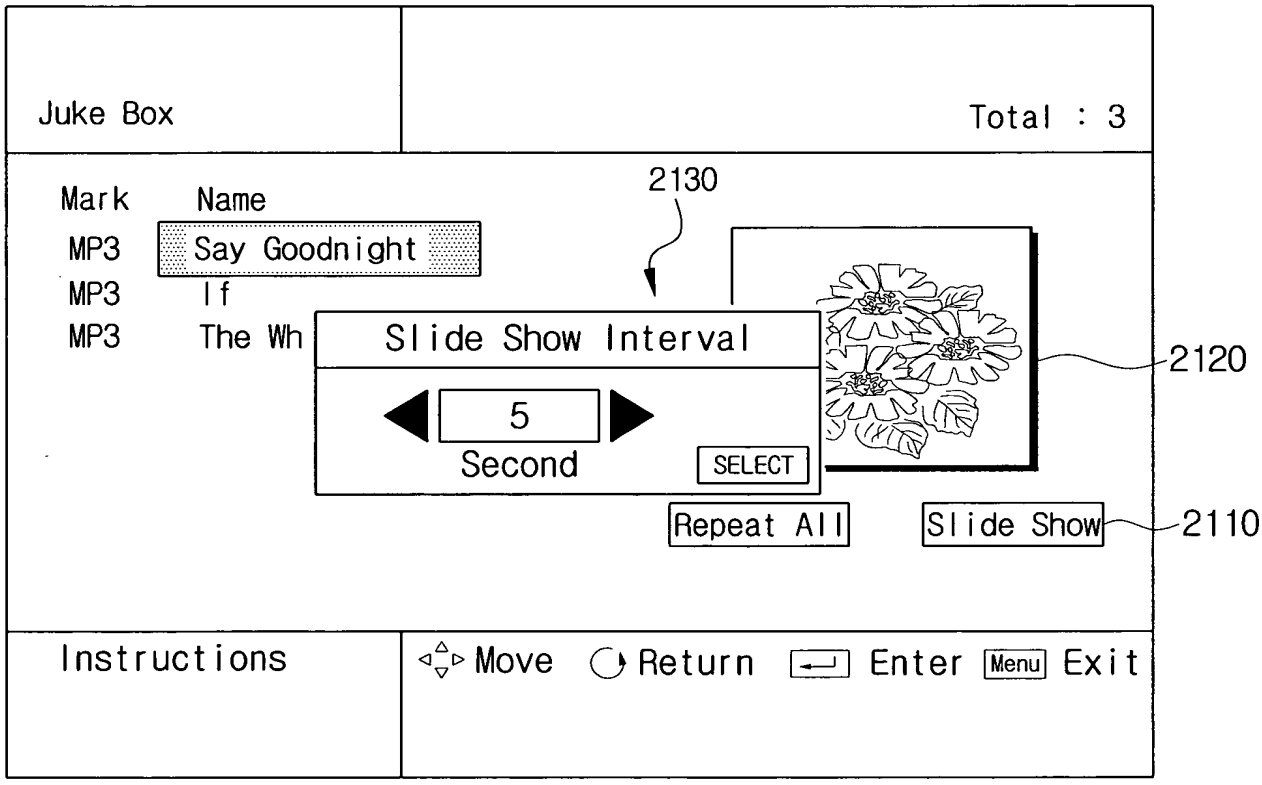

Juke Box
Total : 3
Mark
Name
MP3
Say Goodnight
MP3
If
MP3
The Wh
2130
Slide Show Interval
5
Second
SELECT
2120
Repeat All
Slide Show
2110
Instructions
Move
Return
Enter
Menu
Exit

FIG. 46

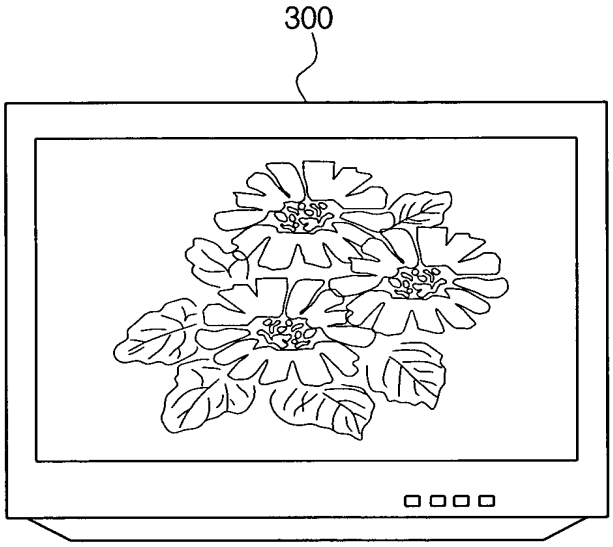


FIG. 47

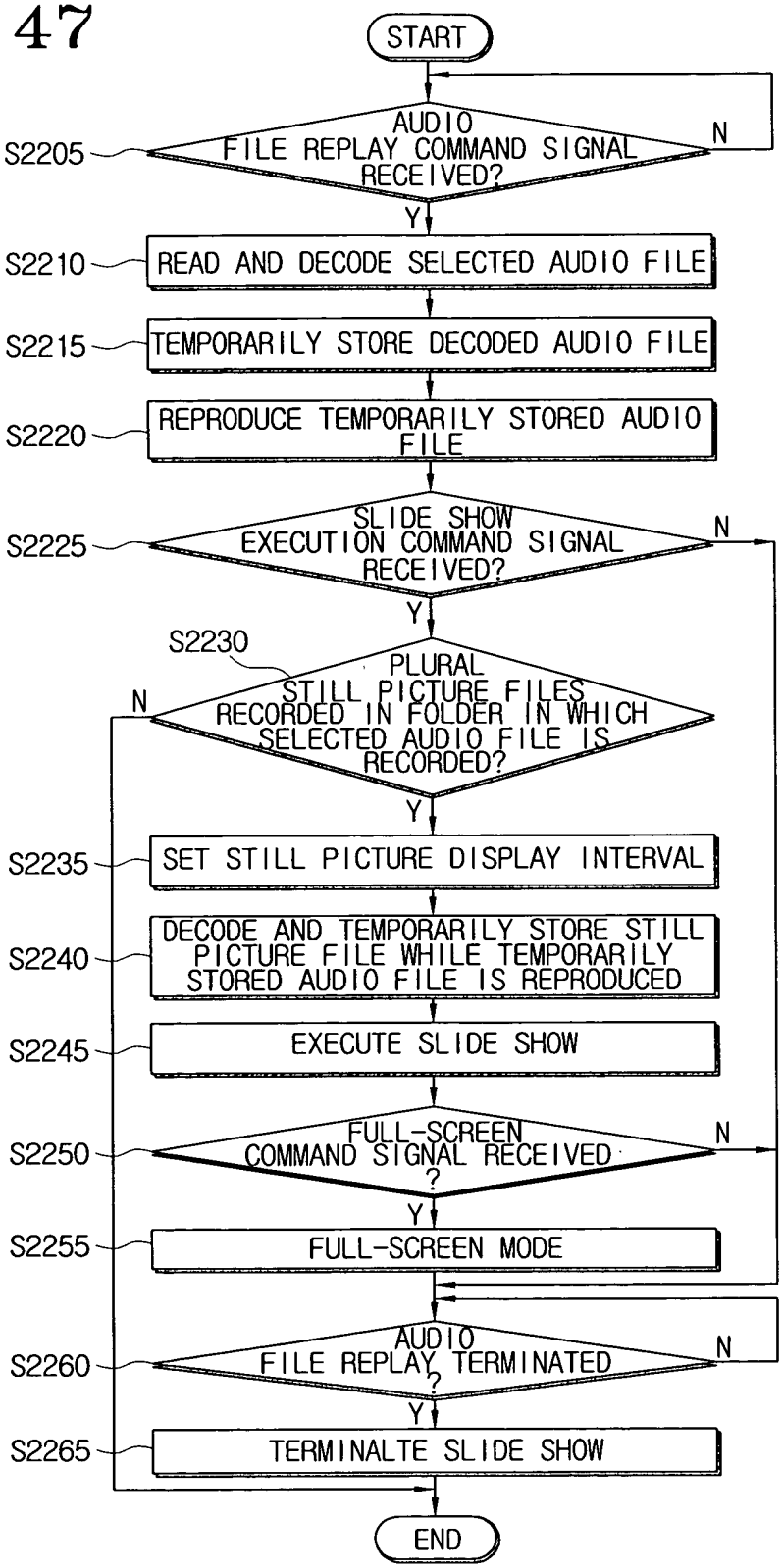

START
S2205
AUDIO FILE REPLAY COMMAND SIGNAL RECEIVED?
N
Y
S2210
READ AND DECODE SELECTED AUDIO FILE
S2215
TEMPORARILY STORE DECODED AUDIO FILE
S2220
REPRODUCE TEMPORARILY STORED AUDIO FILE
S2225
SLIDE SHOW EXECUTION COMMAND SIGNAL RECEIVED?
N
Y
S2230
PLURAL STILL PICTURE FILES RECORDED IN FOLDER IN WHICH SELECTED AUDIO FILE IS RECORDED?
N
Y
S2235
SET STILL PICTURE DISPLAY INTERVAL
S2240
DECODE AND TEMPORARILY STORE STILL PICTURE FILE WHILE TEMPORARILY STORED AUDIO FILE IS REPRODUCED
S2245
EXECUTE SLIDE SHOW
S2250
FULL-SCREEN COMMAND SIGNAL RECEIVED ?
N
Y
S2255
FULL-SCREEN MODE
S2260
AUDIO FILE REPLAY TERMINATED ?
N
Y
S2265
TERMINALTE SLIDE SHOW
END

FIG. 48

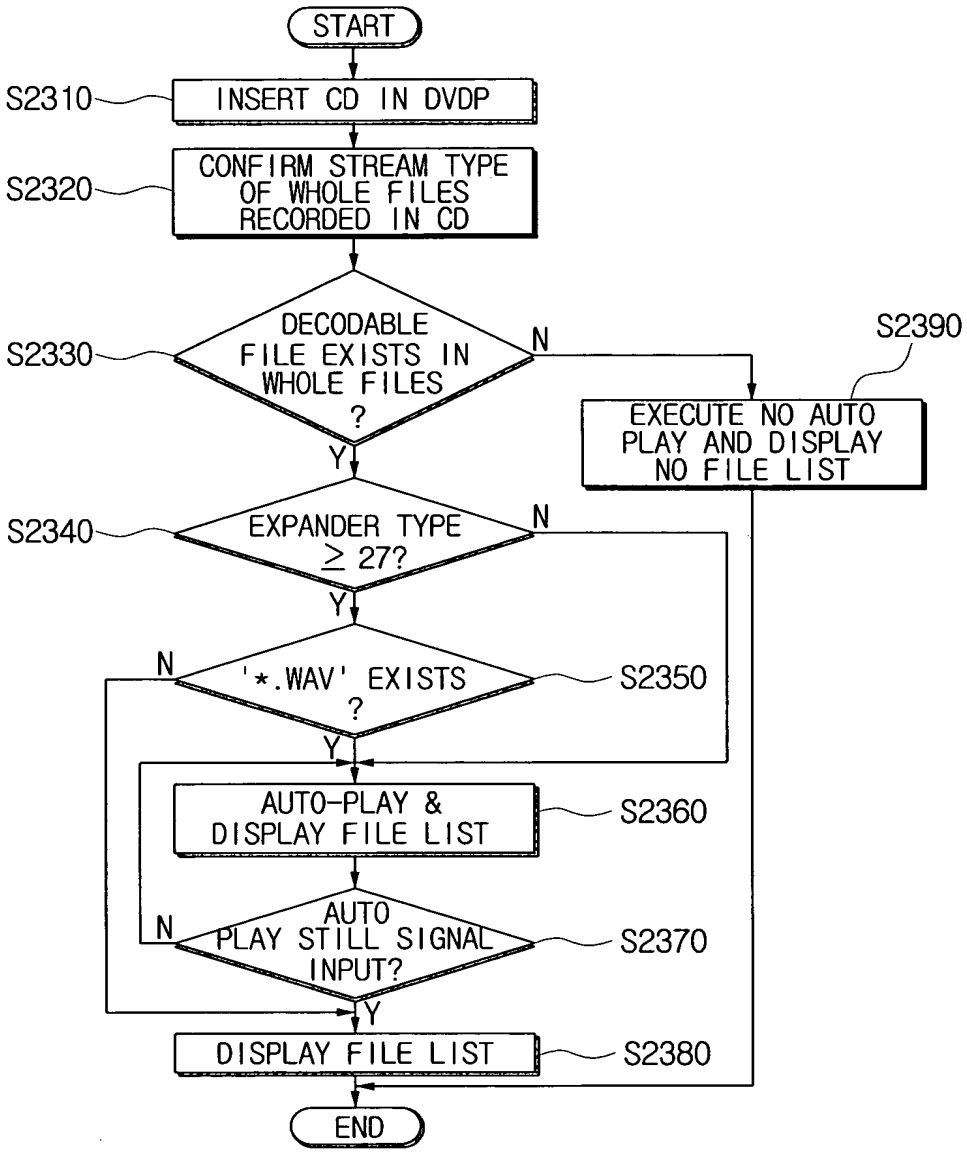

START
S2310
INSERT CD IN DVDP
S2320
CONFIRM STREAM TYPE OF WHOLE FILES RECORDED IN CD
S2330
DECODABLE FILE EXISTS IN WHOLE FILES ?
N
S2390
EXECUTE NO AUTO PLAY AND DISPLAY NO FILE LIST
Y
S2340
EXPANDER TYPE ≥ 27?
N
Y
N
'*.WAV' EXISTS ?
S2350
Y
AUTO-PLAY & DISPLAY FILE LIST
S2360
N
AUTO PLAY STILL SIGNAL INPUT?
S2370
Y
DISPLAY FILE LIST
S2380
END

FIG. 49

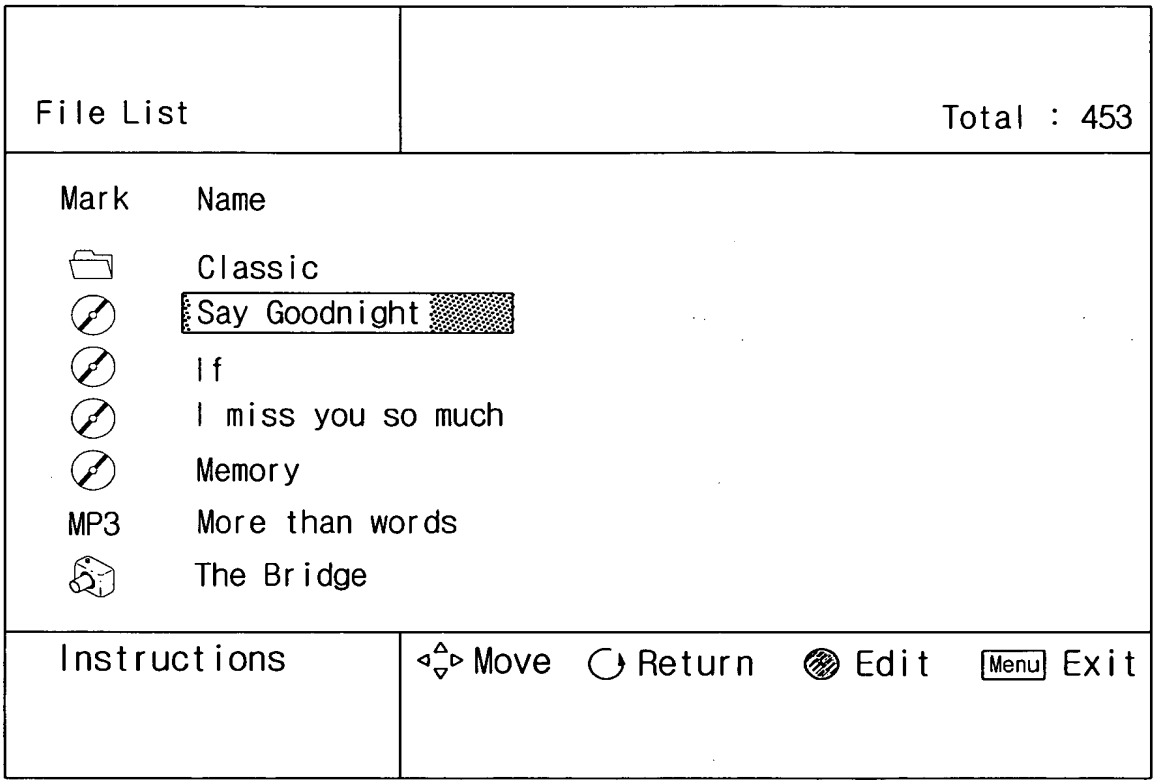

File List
Total : 453
Mark
Name
Classic
Say Goodnight
If
I miss you so much
Memory
MP3
More than words
The Bridge
Instructions
Move
Return
Edit
Menu
Exit

FIG. 50

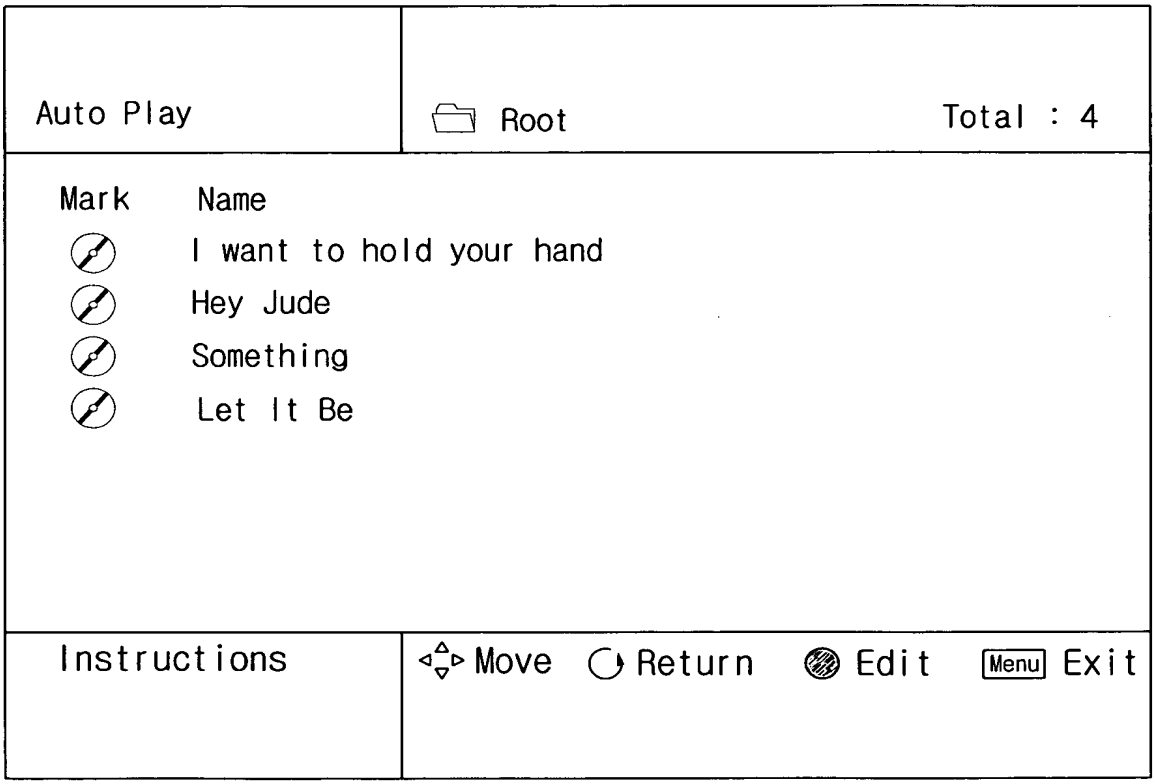

Auto Play
Root
Total : 4
Mark
Name
I want to hold your hand
Hey Jude
Something
Let It Be
Instructions
Move
Return
Edit
Menu
Exit

FIG. 51

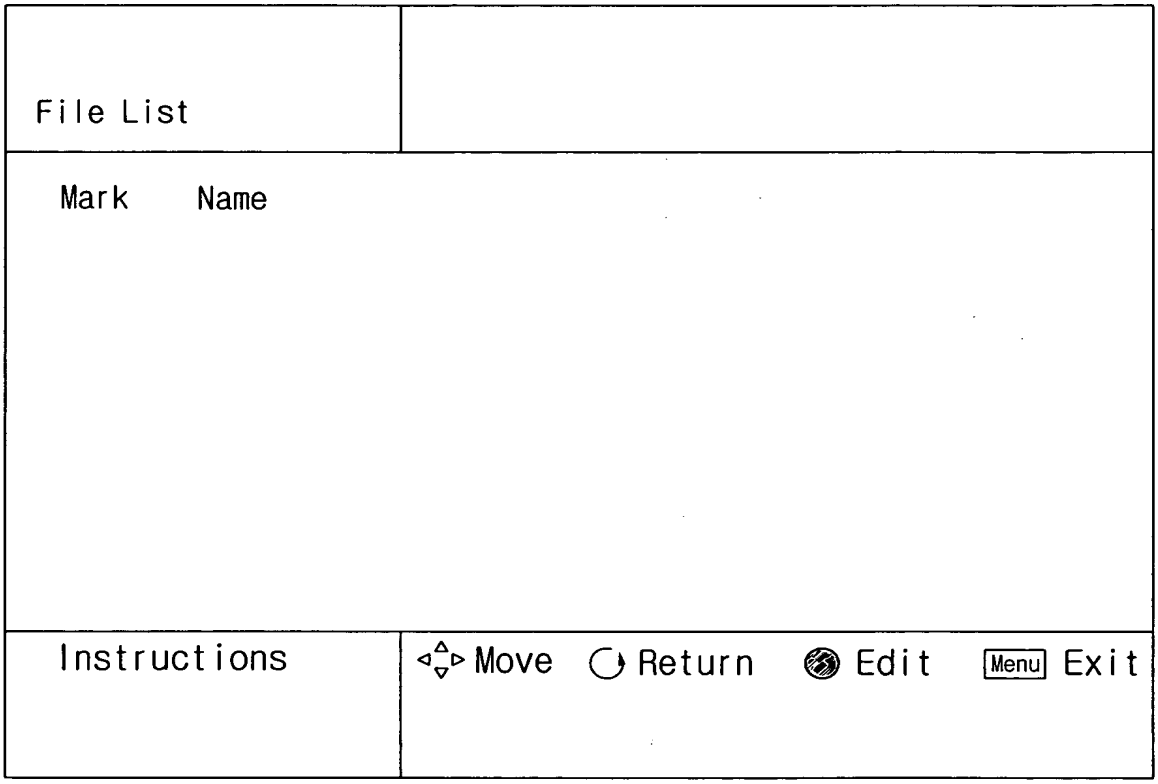

File List
Mark
Name
Instructions
Move
Return
Edit
Menu
Exit

FIG. 52

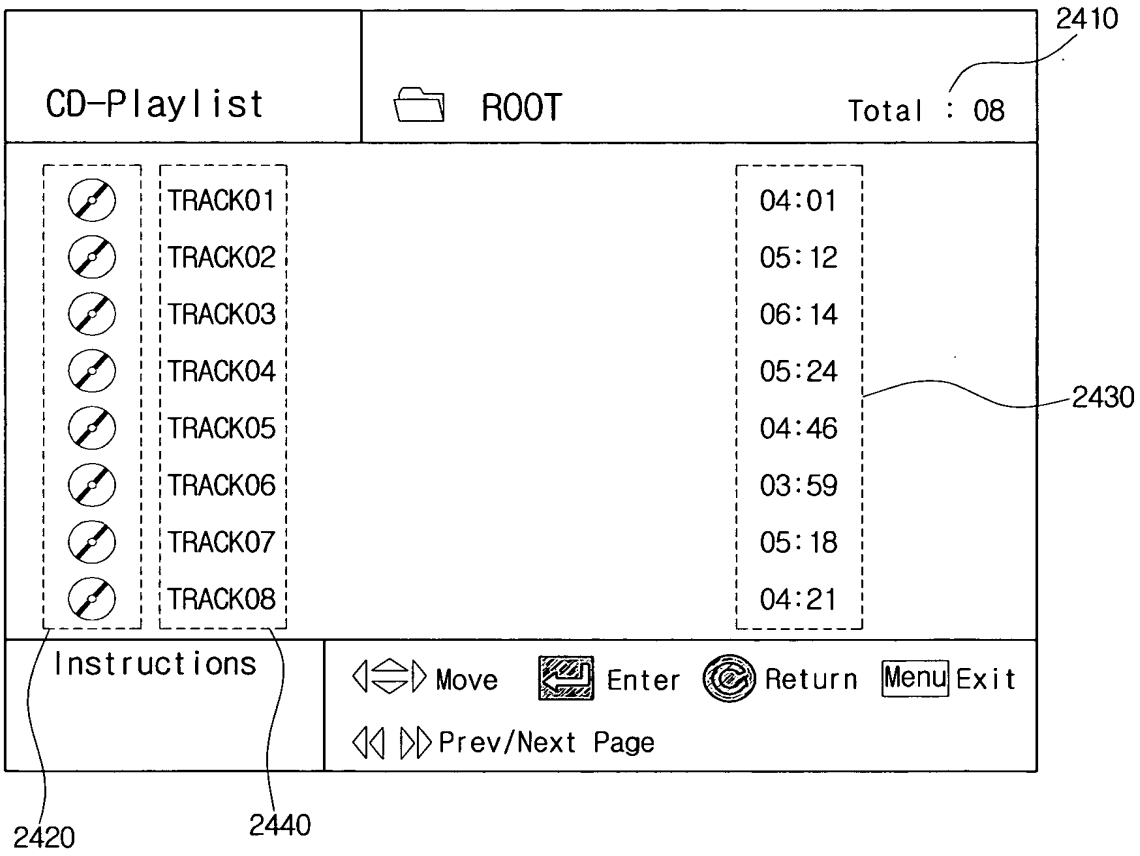

2410
CD-Playlist
ROOT
Total : 08
TRACK01
TRACK02
TRACK03
TRACK04
TRACK05
TRACK06
TRACK07
TRACK08
04:01
05:12
06:14
05:24
04:46
03:59
05:18
04:21
2430
Instructions
Move
Enter
Return
Menu Exit
Prev/Next Page
2420
2440

FIG. 53

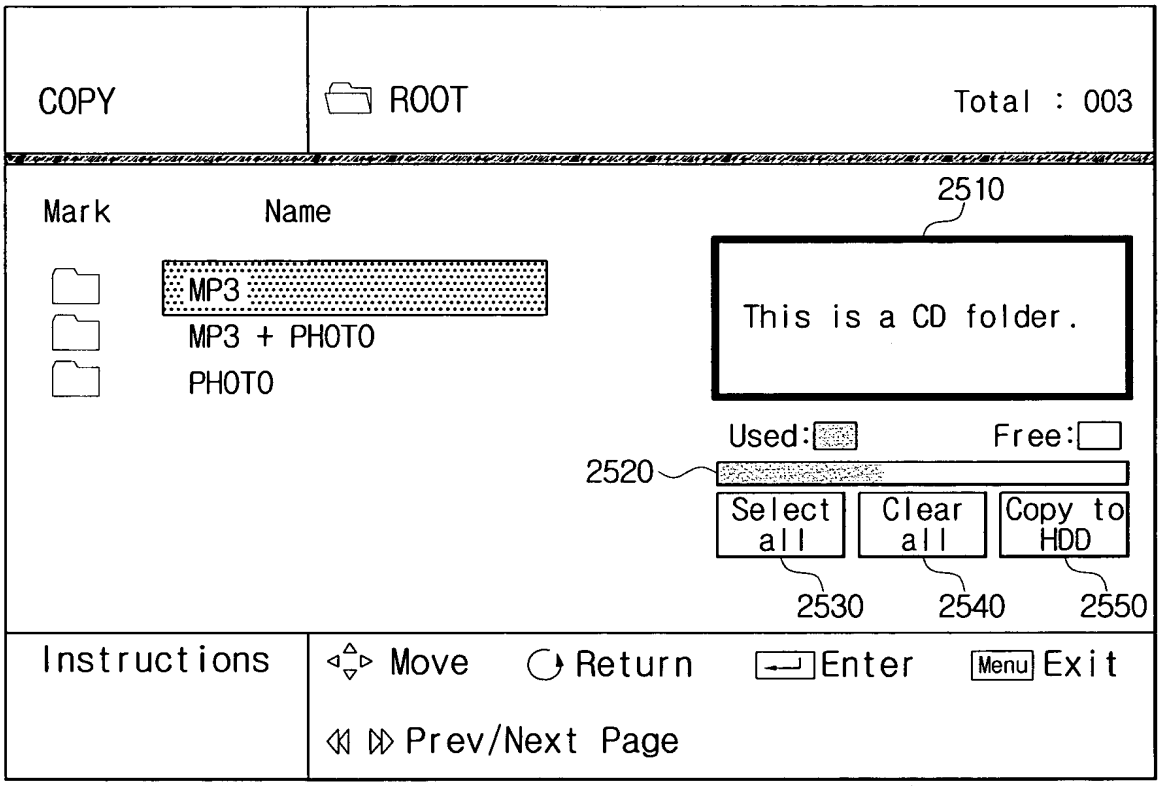

COPY
ROOT
Total : 003
Mark
Name
MP3
MP3 + PHOTO
PHOTO
2510
This is a CD folder.
Used:
Free:
2520
Select all
Clear all
Copy to HDD
2530
2540
2550
Instructions
Move
Return
Enter
Menu Exit
Prev/Next Page

FIG. 54

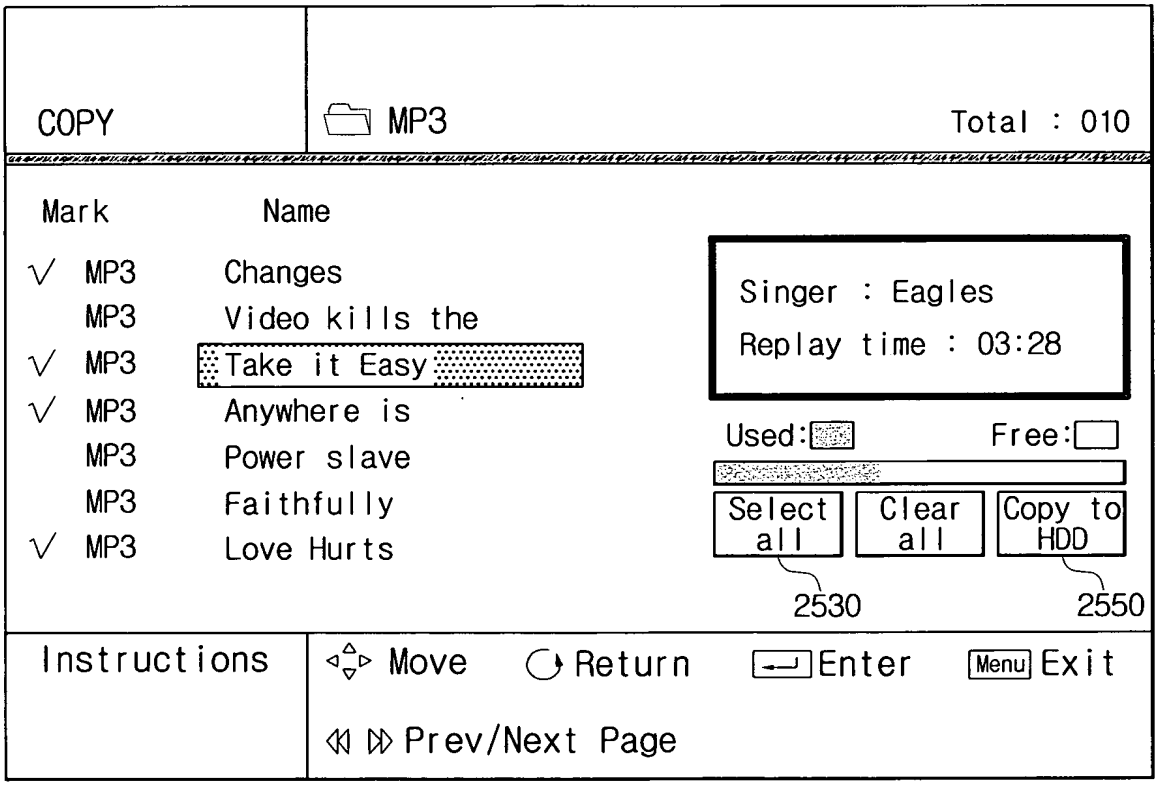

COPY
MP3
Total : 010
Mark
Name
√ MP3 Changes
MP3 Video kills the
√ MP3 Take it Easy
√ MP3 Anywhere is
MP3 Power slave
MP3 Faithfully
√ MP3 Love Hurts
Singer : Eagles
Replay time : 03:28
Used:
Free:
Select all
Clear all
Copy to HDD
2530
2550
Instructions
Move
Return
Enter
Menu Exit
Prev/Next Page

FIG. 55

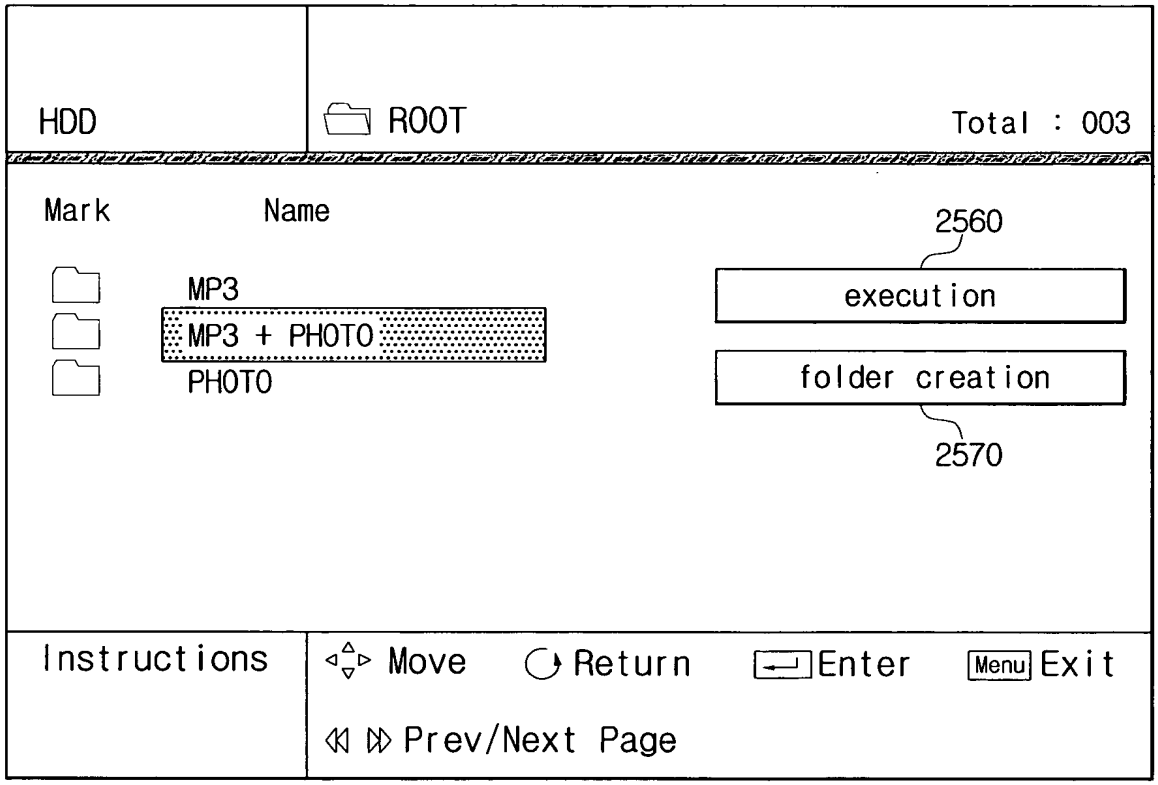

HDD
ROOT
Total : 003
Mark
Name
MP3
MP3 + PHOTO
PHOTO
2560
execution
folder creation
2570
Instructions
Move
Return
Enter
Menu Exit
Prev/Next Page

FIG. 56

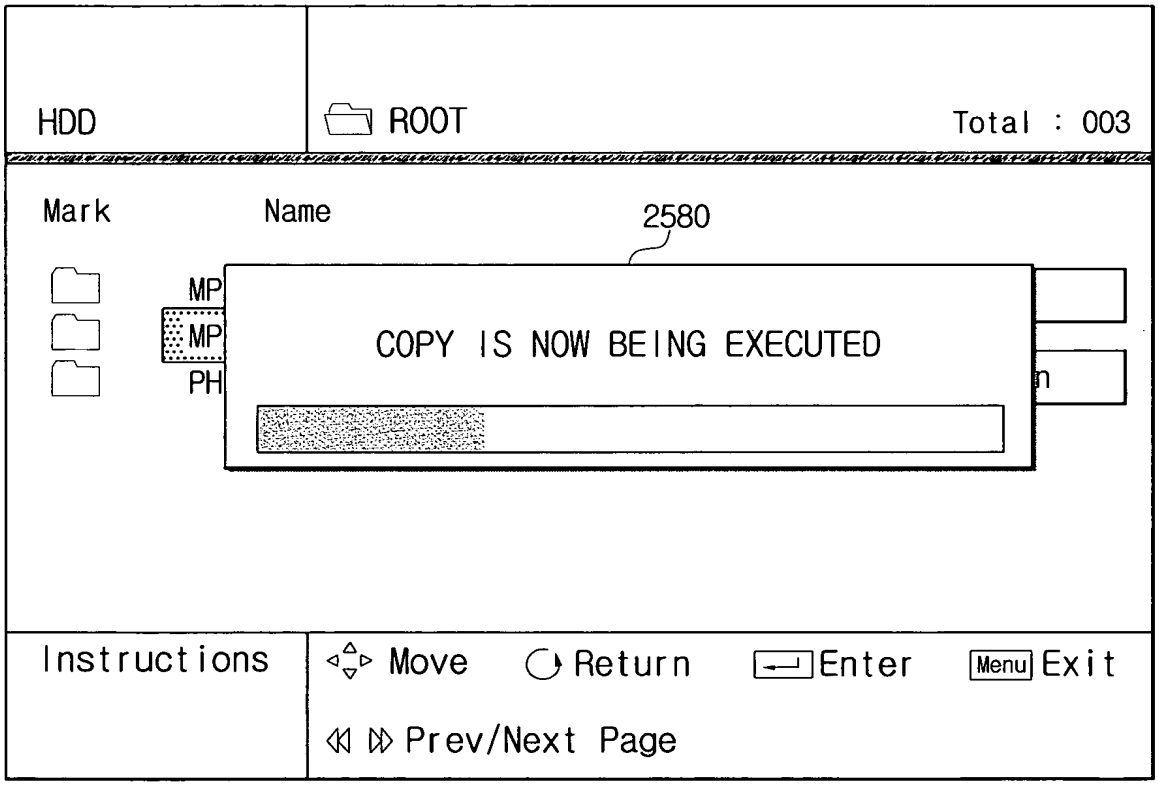

HDD
ROOT
Total : 003
Mark
Name
2580
MP
MP
PH
COPY IS NOW BEING EXECUTED
Instructions
Move
Return
Enter
Menu
Exit
Prev/Next Page

FIG. 57

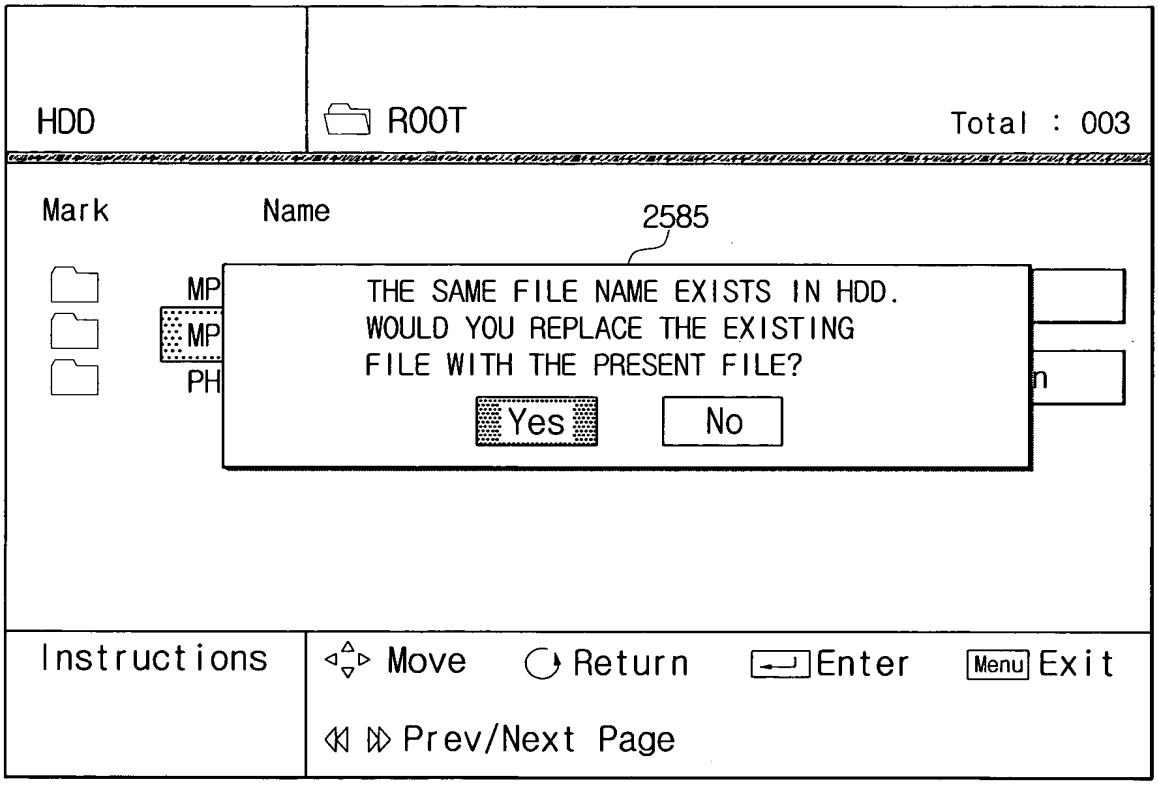

HDD
ROOT
Total : 003
Mark
Name
2585
MP
MP
PH
THE SAME FILE NAME EXISTS IN HDD.
WOULD YOU REPLACE THE EXISTING
FILE WITH THE PRESENT FILE?
Yes
No
Instructions
Move
Return
Enter
Menu
Exit
Prev/Next Page

FIG. 58

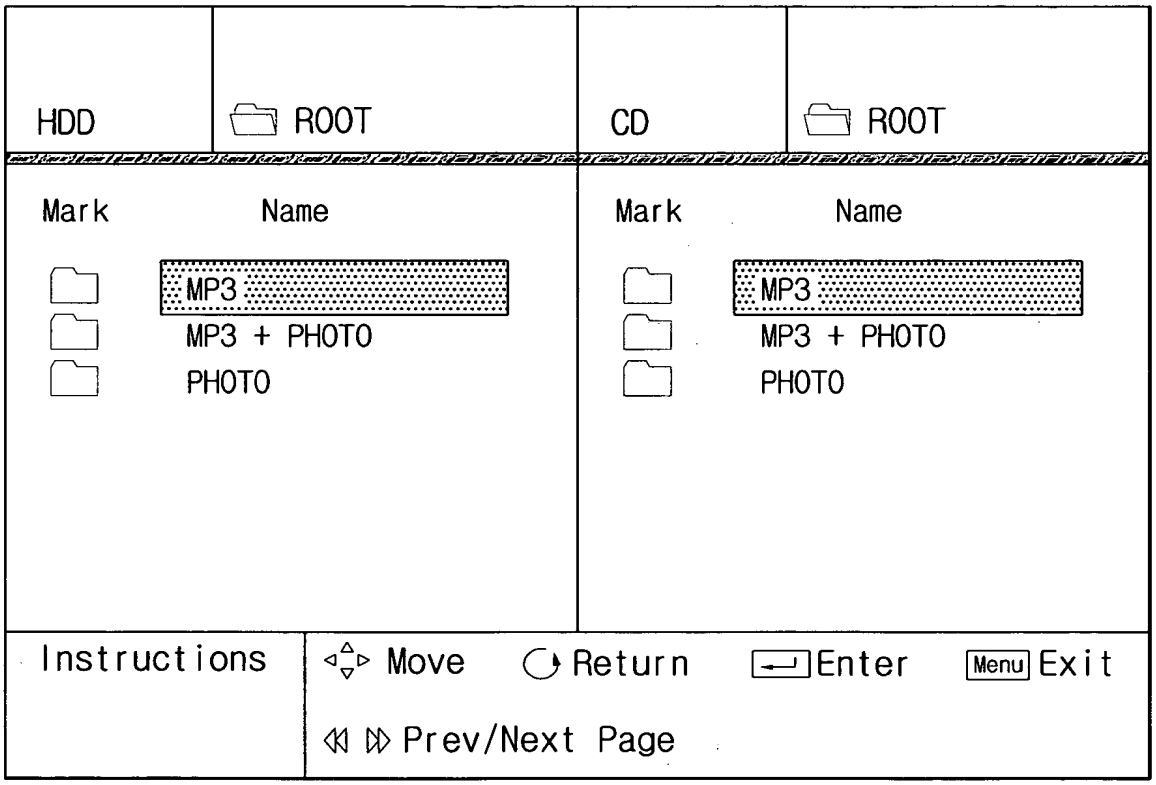

HDD
ROOT
CD
ROOT
Mark
Name
MP3
MP3 + PHOTO
PHOTO
Mark
Name
MP3
MP3 + PHOTO
PHOTO
Instructions
Move
Return
Enter
Menu
Exit
Prev/Next Page

FIG. 59

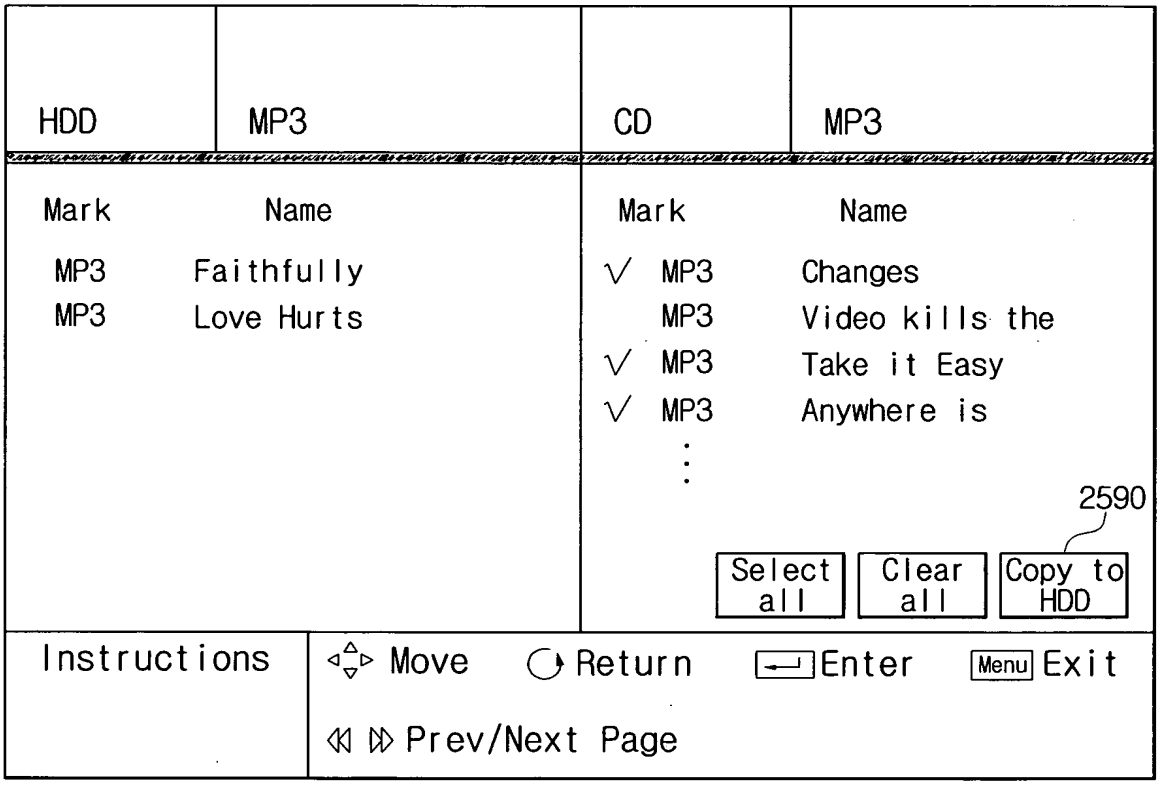

HDD
MP3
CD
MP3
Mark
Name
MP3
Faithfully
MP3
Love Hurts
Mark
Name
√ MP3
Changes
MP3
Video kills the
√ MP3
Take it Easy
√ MP3
Anywhere is
2590
Select all
Clear all
Copy to HDD
Instructions
Move
Return
Enter
Menu Exit
Prev/Next Page

FIG. 60

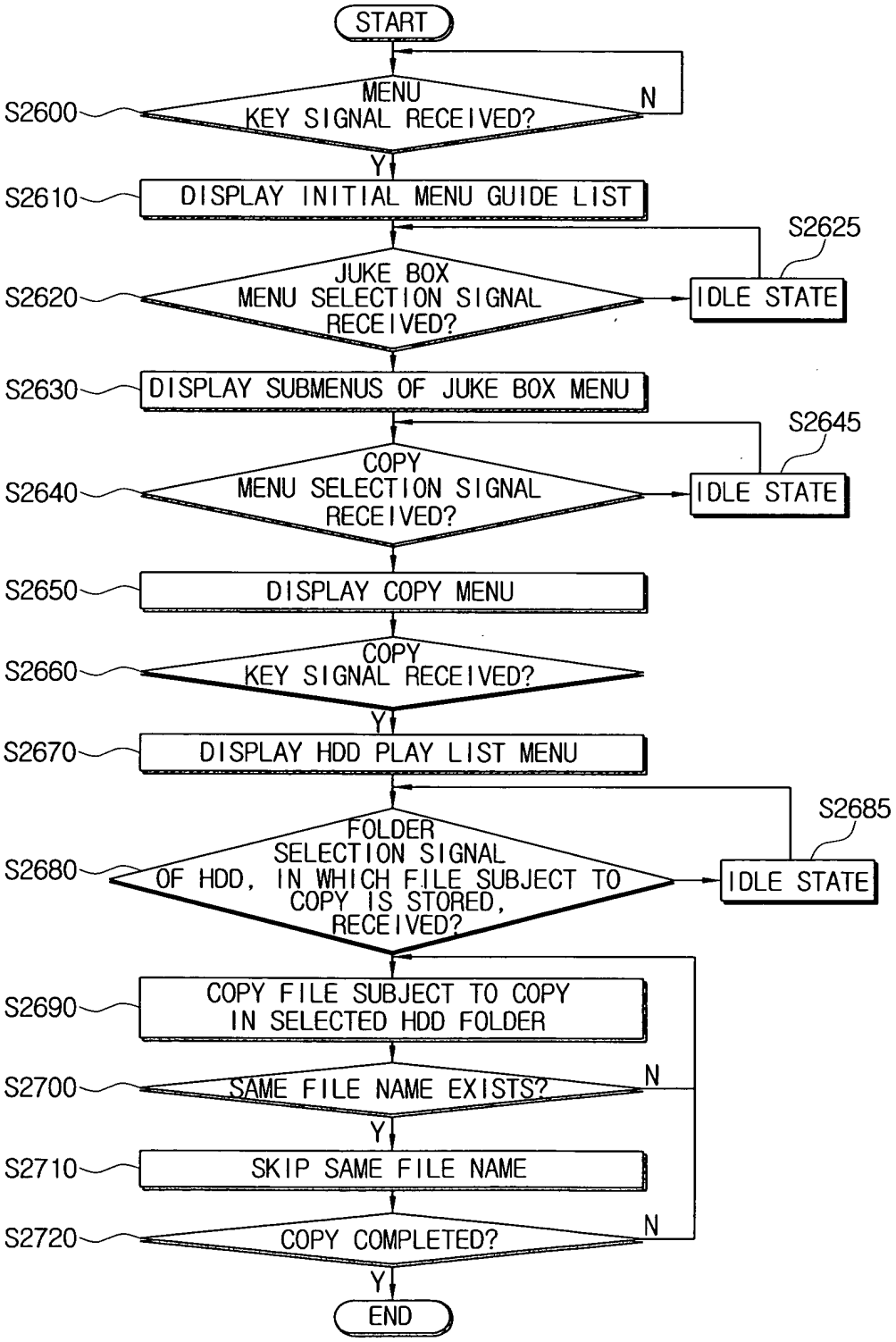

START
S2600
MENU KEY SIGNAL RECEIVED?
N
Y
S2610
DISPLAY INITIAL MENU GUIDE LIST
S2625
S2620
JUKE BOX MENU SELECTION SIGNAL RECEIVED?
IDLE STATE
S2630
DISPLAY SUBMENUS OF JUKE BOX MENU
S2645
S2640
COPY MENU SELECTION SIGNAL RECEIVED?
IDLE STATE
S2650
DISPLAY COPY MENU
S2660
COPY KEY SIGNAL RECEIVED?
Y
S2670
DISPLAY HDD PLAY LIST MENU
S2685
S2680
FOLDER SELECTION SIGNAL OF HDD, IN WHICH FILE SUBJECT TO COPY IS STORED, RECEIVED?
IDLE STATE
S2690
COPY FILE SUBJECT TO COPY IN SELECTED HDD FOLDER
S2700
SAME FILE NAME EXISTS?
N
Y
S2710
SKIP SAME FILE NAME
S2720
COPY COMPLETED?
N
Y
END

FIG. 61

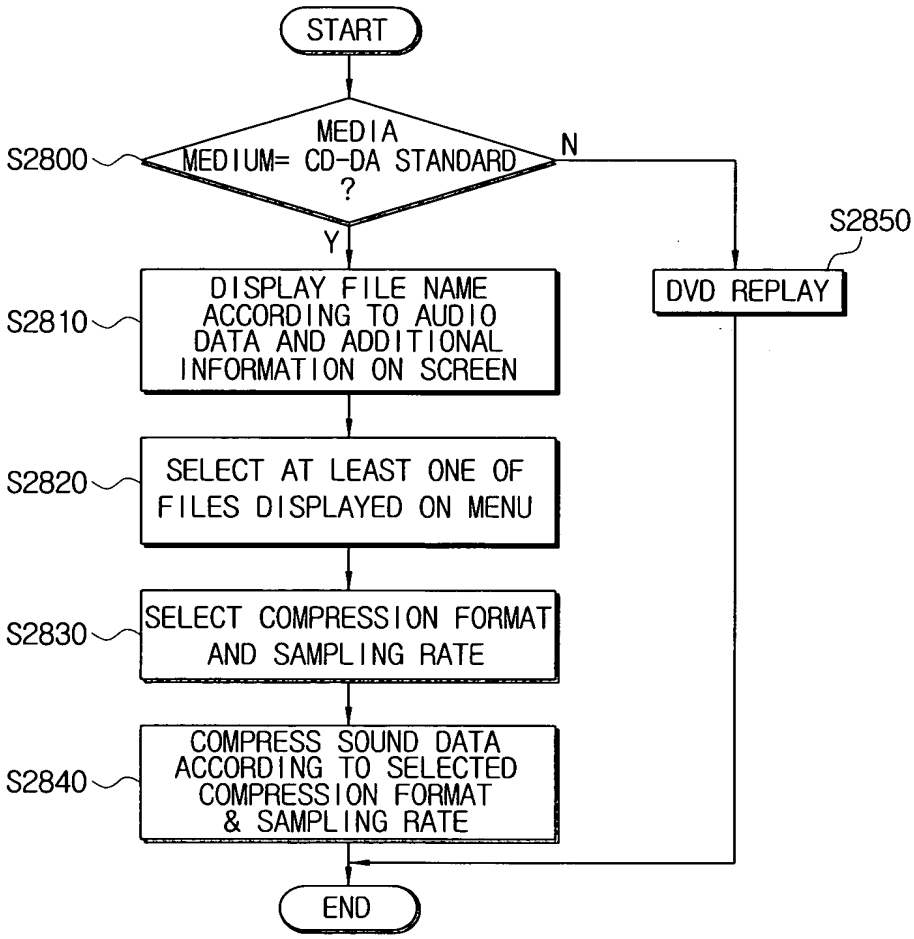

START
MEDIA MEDIUM= CD-DA STANDARD ?
S2800
N
Y
S2850
DVD REPLAY
DISPLAY FILE NAME ACCORDING TO AUDIO DATA AND ADDITIONAL INFORMATION ON SCREEN
S2810
SELECT AT LEAST ONE OF FILES DISPLAYED ON MENU
S2820
SELECT COMPRESSION FORMAT AND SAMPLING RATE
S2830
COMPRESS SOUND DATA ACCORDING TO SELECTED COMPRESSION FORMAT & SAMPLING RATE
S2840
END

FIG. 62

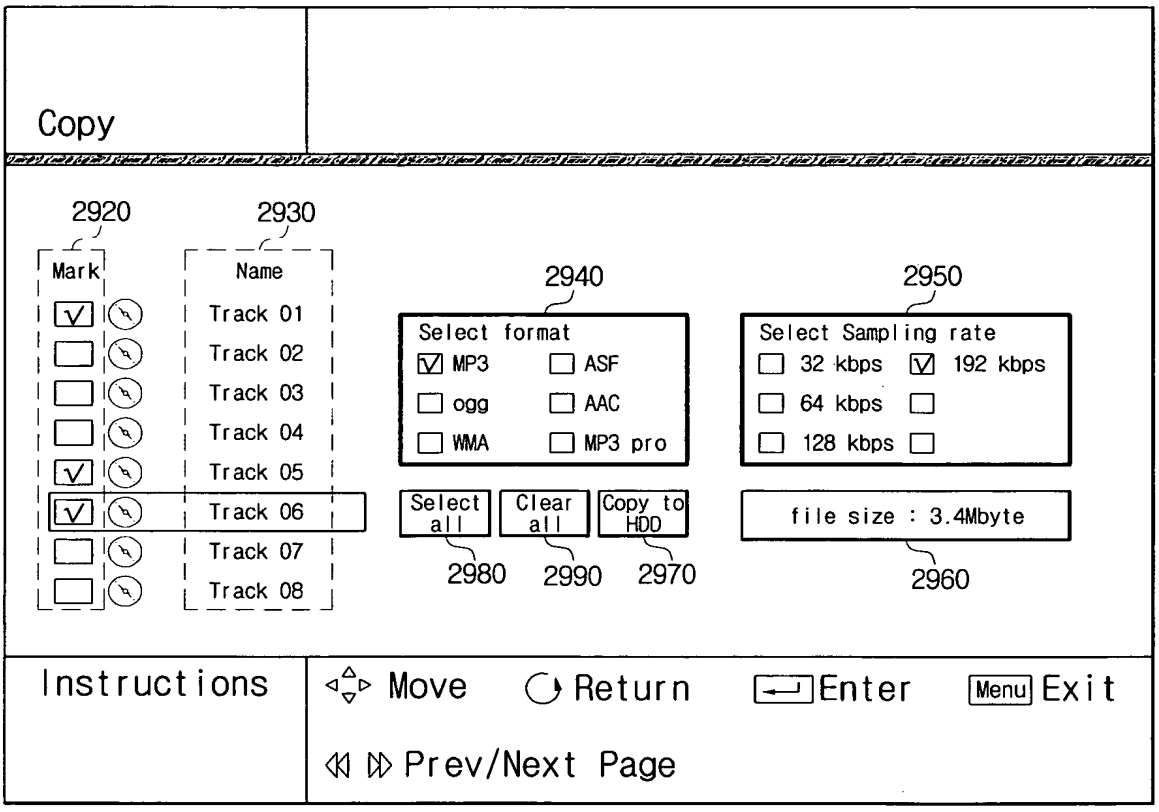

Copy
2920
2930
Mark
Name
Track 01
Track 02
Track 03
Track 04
Track 05
Track 06
Track 07
Track 08
2940
Select format
MP3
ASF
ogg
AAC
WMA
MP3 pro
2950
Select Sampling rate
32 kbps
192 kbps
64 kbps
128 kbps
Select all
Clear all
Copy to HDD
file size : 3.4Mbyte
2980
2990
2970
2960
Instructions
Move
Return
Enter
Menu Exit
Prev/Next Page

FIG. 63

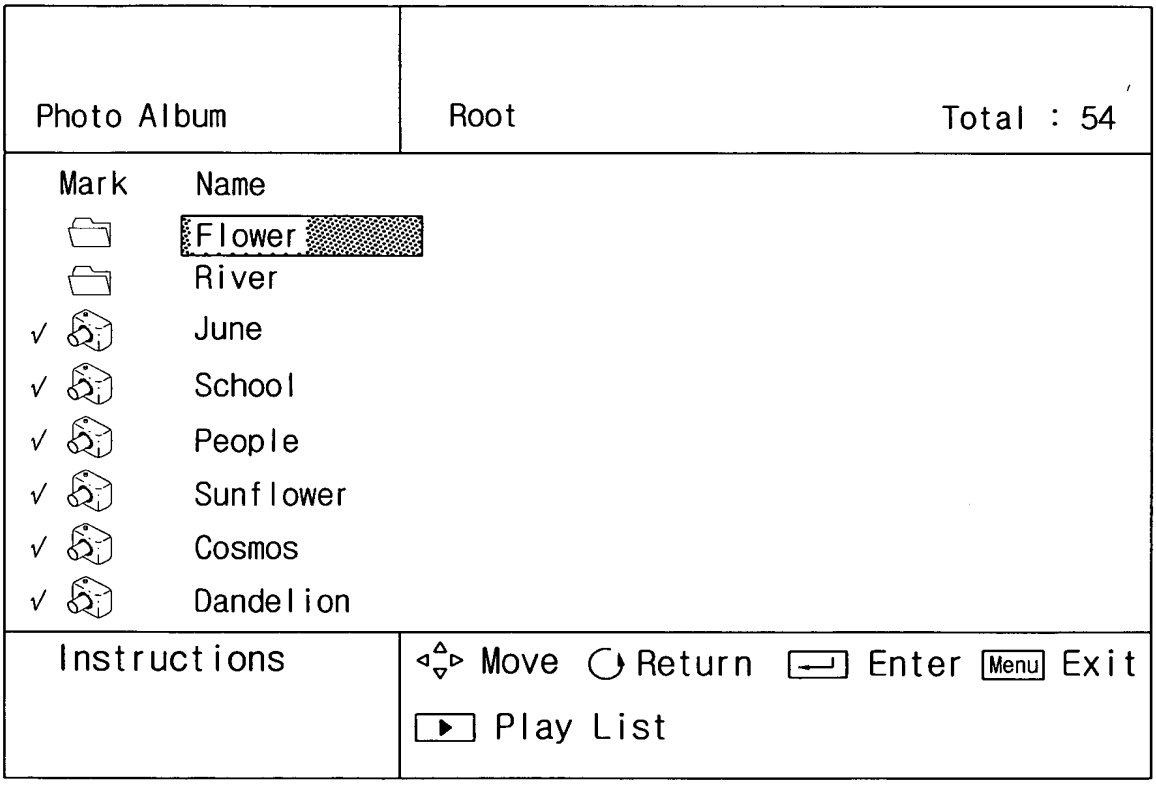


Photo Album
Root
Total : 54
Mark
Name
Flower
River
June
School
People
Sunflower
Cosmos
Dandelion
Instructions
Move
Return
Enter
Menu
Exit
Play List

FIG. 64

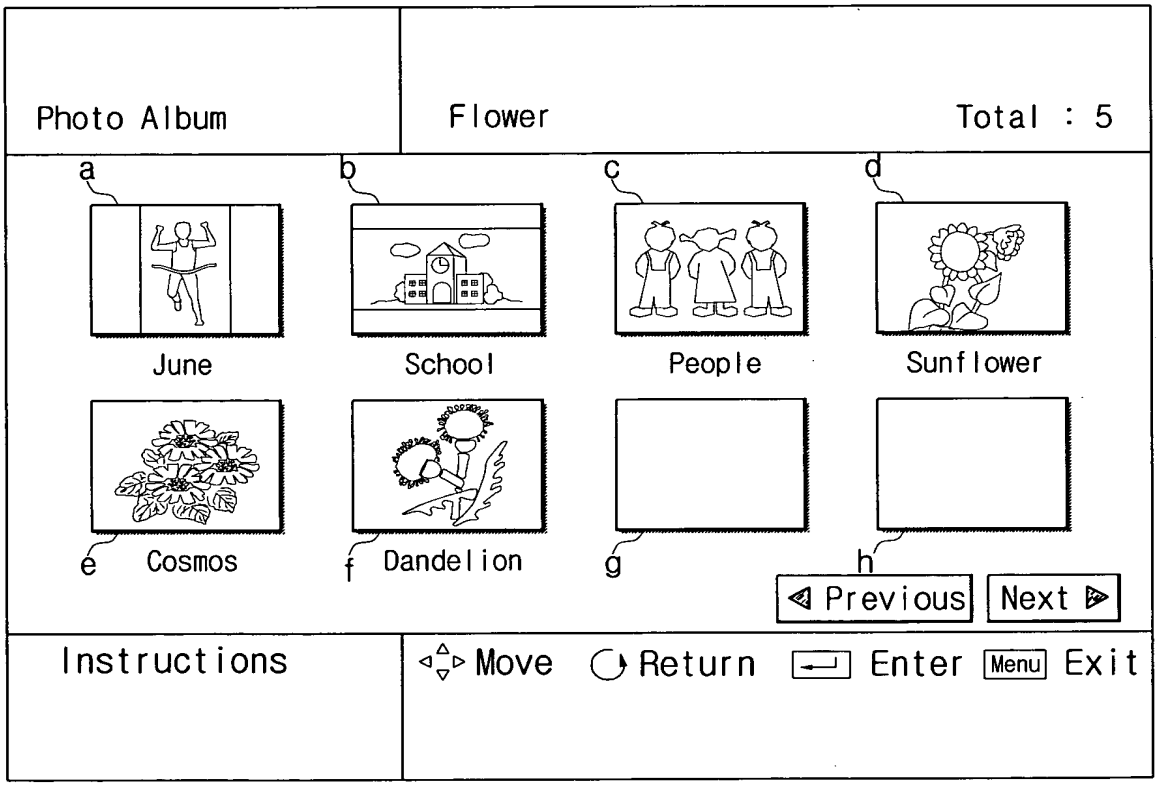


Photo Album
Flower
Total : 5
a
b
c
d
June
School
People
Sunflower
e
Cosmos
f
Dandelion
g
h
Previous
Next
Instructions
Move
Return
Enter
Menu
Exit

FIG. 65

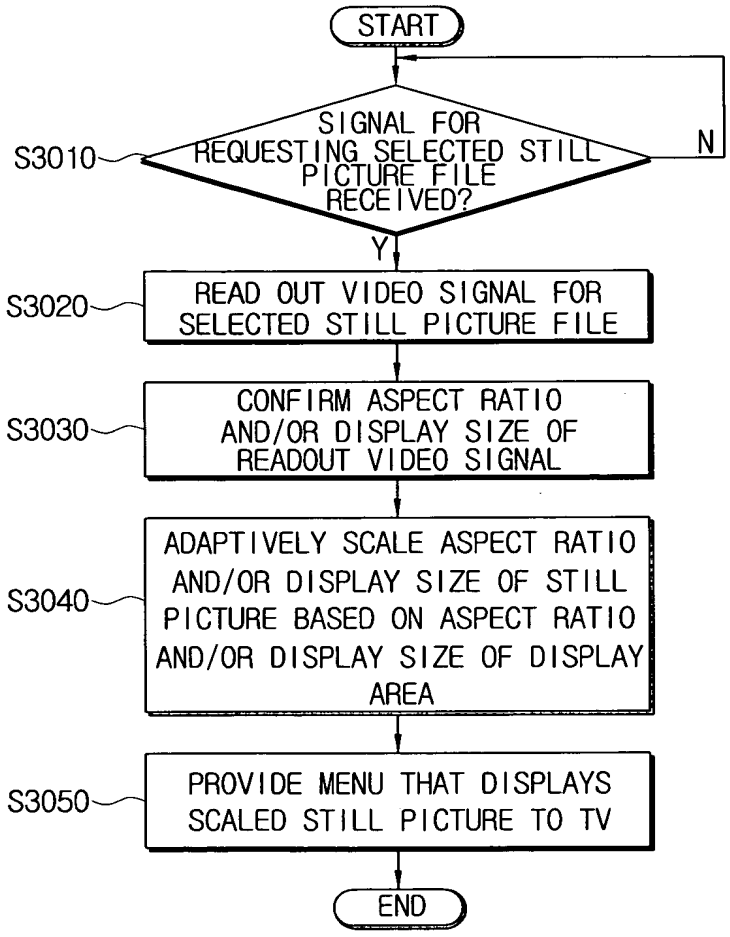

START
S3010
SIGNAL FOR REQUESTING SELECTED STILL PICTURE FILE RECEIVED?
N
Y
S3020
READ OUT VIDEO SIGNAL FOR SELECTED STILL PICTURE FILE
S3030
CONFIRM ASPECT RATIO AND/OR DISPLAY SIZE OF READOUT VIDEO SIGNAL
S3040
ADAPTIVELY SCALE ASPECT RATIO AND/OR DISPLAY SIZE OF STILL PICTURE BASED ON ASPECT RATIO AND/OR DISPLAY SIZE OF DISPLAY AREA
S3050
PROVIDE MENU THAT DISPLAYS SCALED STILL PICTURE TO TV
END

FIG. 66

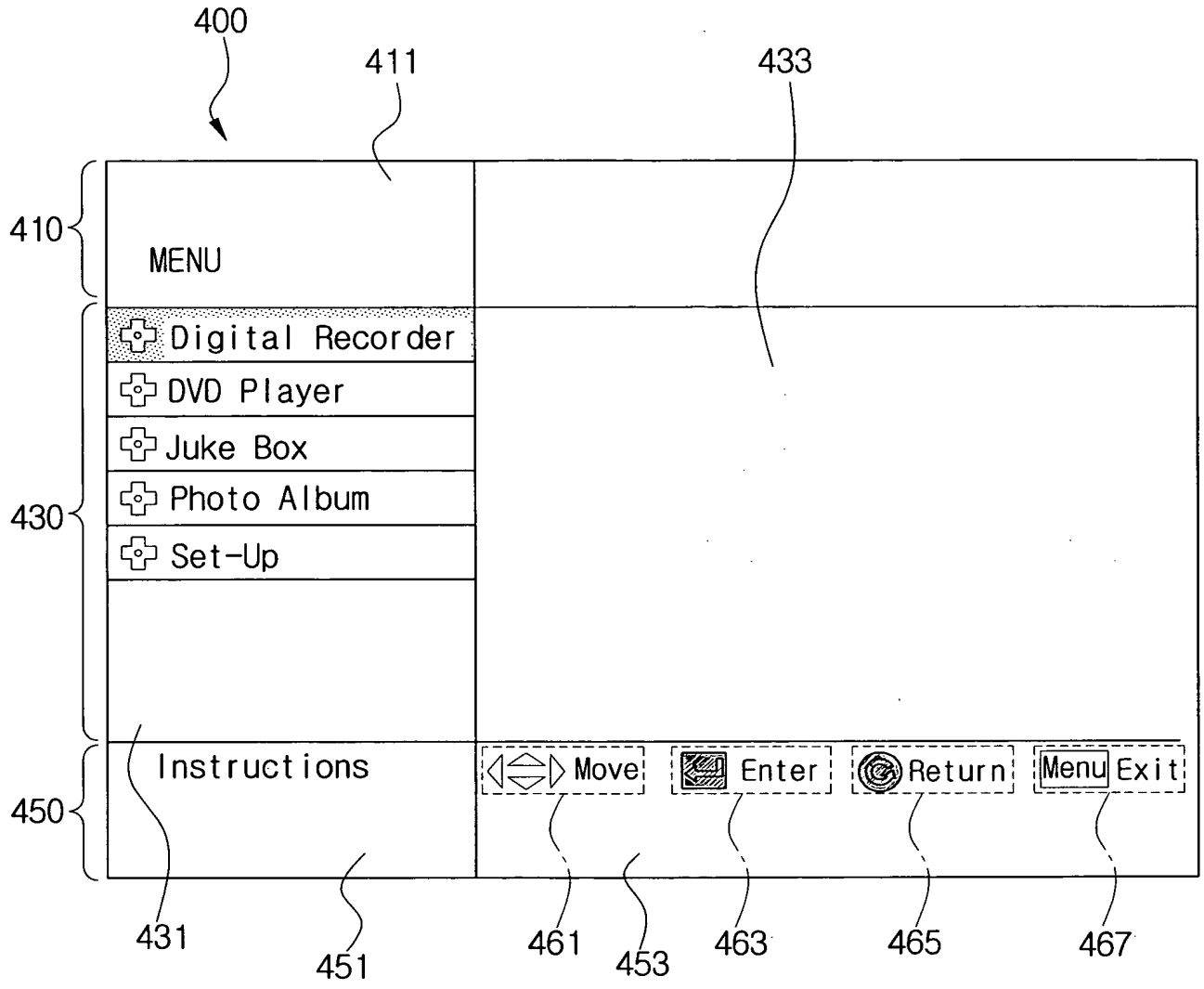

400
411
433
410
MENU
Digital Recorder
DVD Player
Juke Box
Photo Album
Set-Up
430
Instructions
Move
Enter
Return
Menu Exit
450
431
451
461
453
463
465
467

FIG. 67

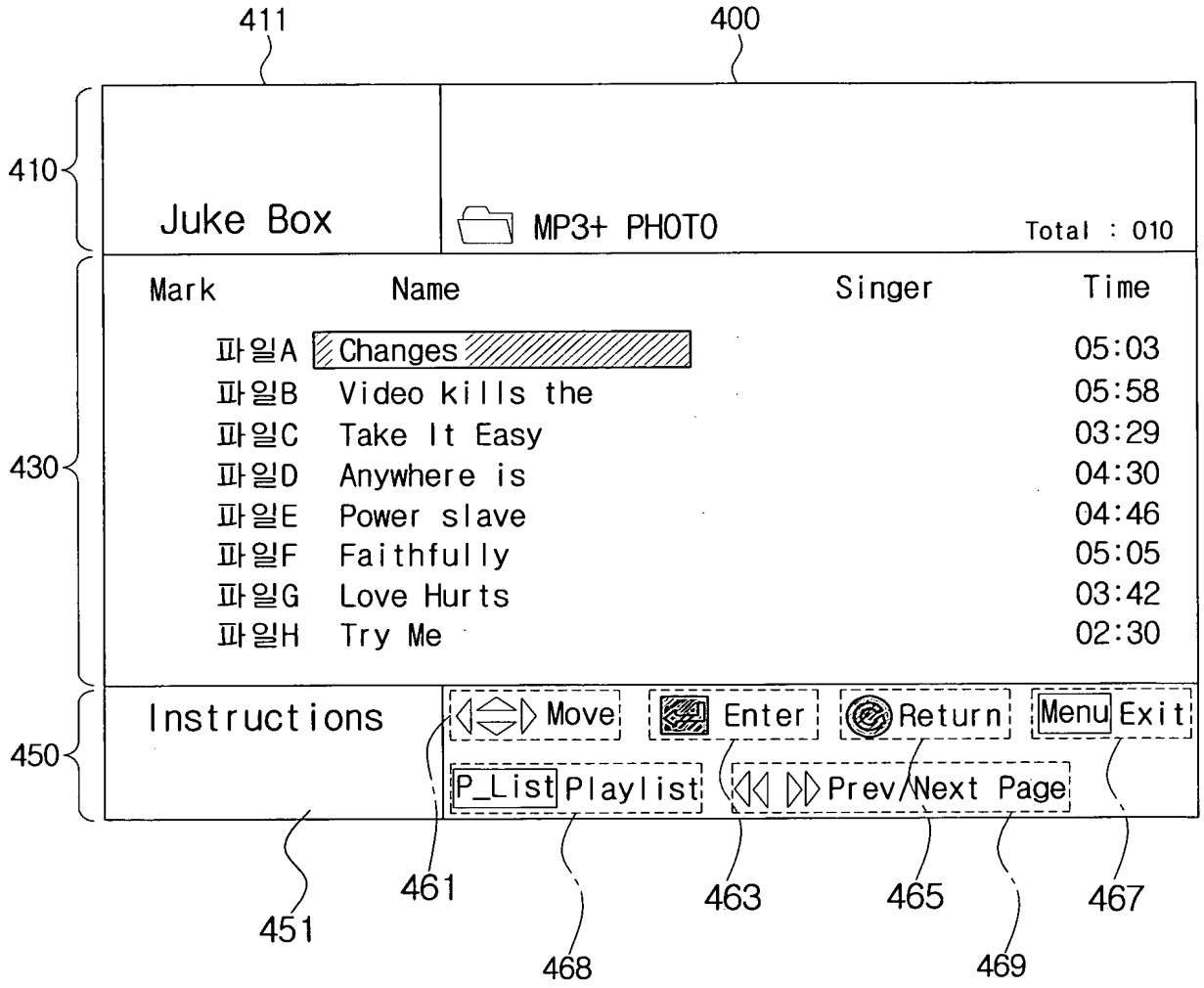

411
400
410
Juke Box
MP3+ PHOTO
Total : 010
Mark
Name
Singer
Time
430
파일A Changes 05:03
파일B Video kills the 05:58
파일C Take It Easy 03:29
파일D Anywhere is 04:30
파일E Power slave 04:46
파일F Faithfully 05:05
파일G Love Hurts 03:42
파일H Try Me 02:30
450
Instructions
Move
Enter
Return
Menu Exit
P_List Playlist
Prev/Next Page
451
461
468
463
465
469
467

FIG. 68

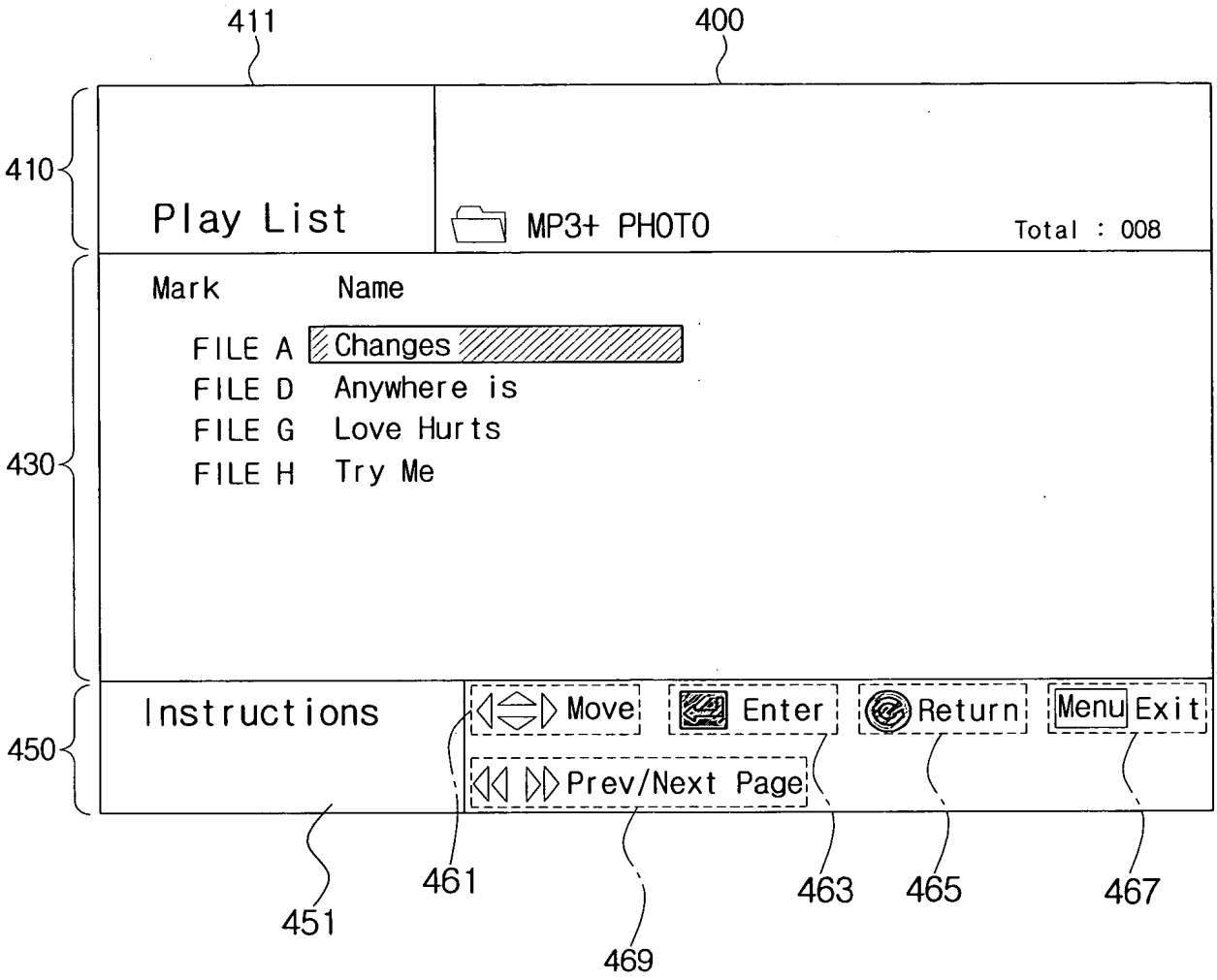

411
400
410
Play List
MP3+ PHOTO
Total : 008
Mark
Name
FILE A
Changes
FILE D
Anywhere is
FILE G
Love Hurts
FILE H
Try Me
430
450
Instructions
Move
Enter
Return
Menu
Exit
Prev/Next Page
451
461
469
463
465
467

FIG. 69

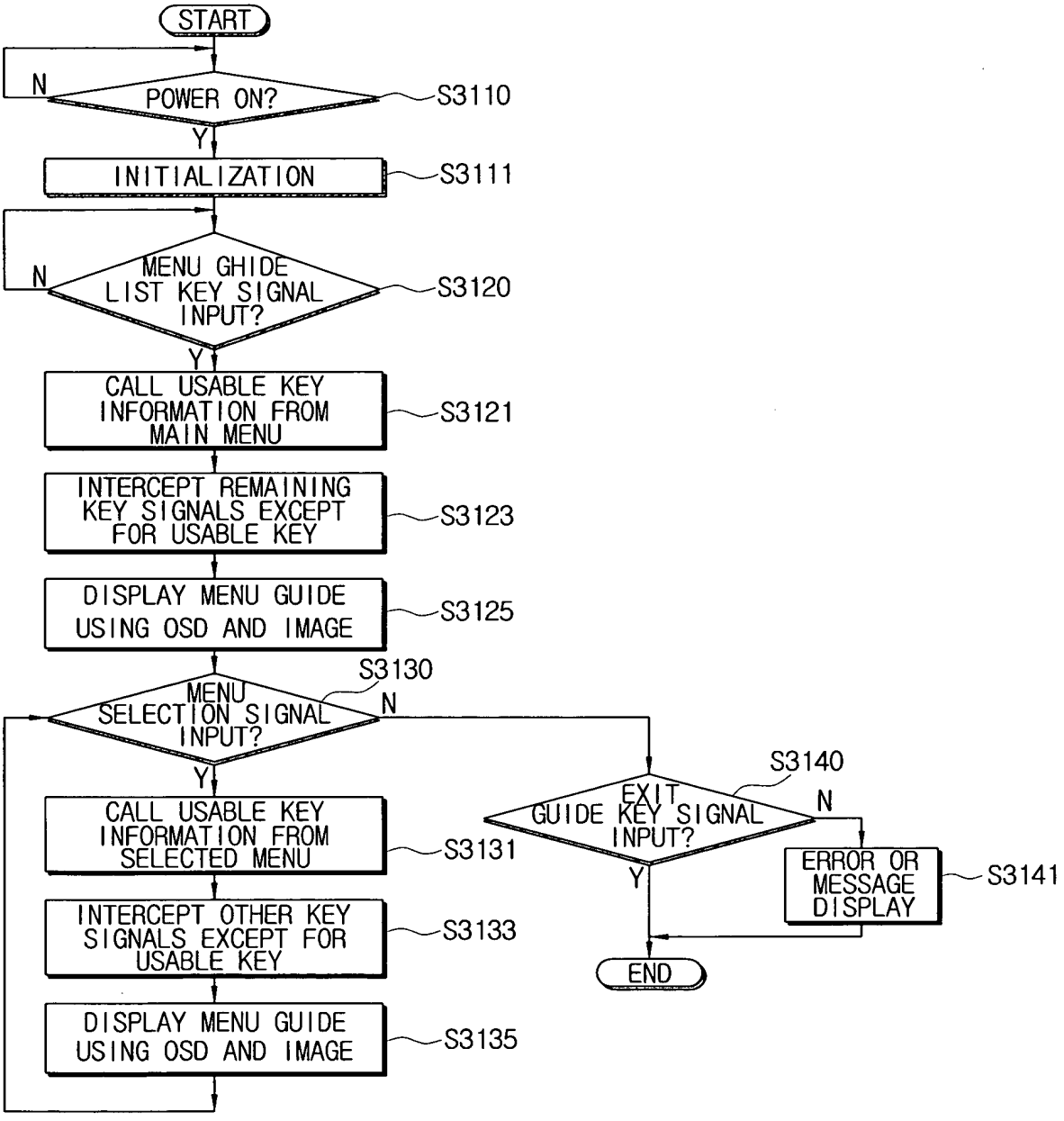

START
POWER ON?
N
Y
S3110
INITIALIZATION
S3111
MENU GHIDE LIST KEY SIGNAL INPUT?
N
Y
S3120
CALL USABLE KEY INFORMATION FROM MAIN MENU
S3121
INTERCEPT REMAINING KEY SIGNALS EXCEPT FOR USABLE KEY
S3123
DISPLAY MENU GUIDE USING OSD AND IMAGE
S3125
S3130
MENU SELECTION SIGNAL INPUT?
N
Y
CALL USABLE KEY INFORMATION FROM SELECTED MENU
S3131
INTERCEPT OTHER KEY SIGNALS EXCEPT FOR USABLE KEY
S3133
DISPLAY MENU GUIDE USING OSD AND IMAGE
S3135
S3140
EXIT GUIDE KEY SIGNAL INPUT?
N
Y
ERROR OR MESSAGE DISPLAY
S3141
END

FIG. 70

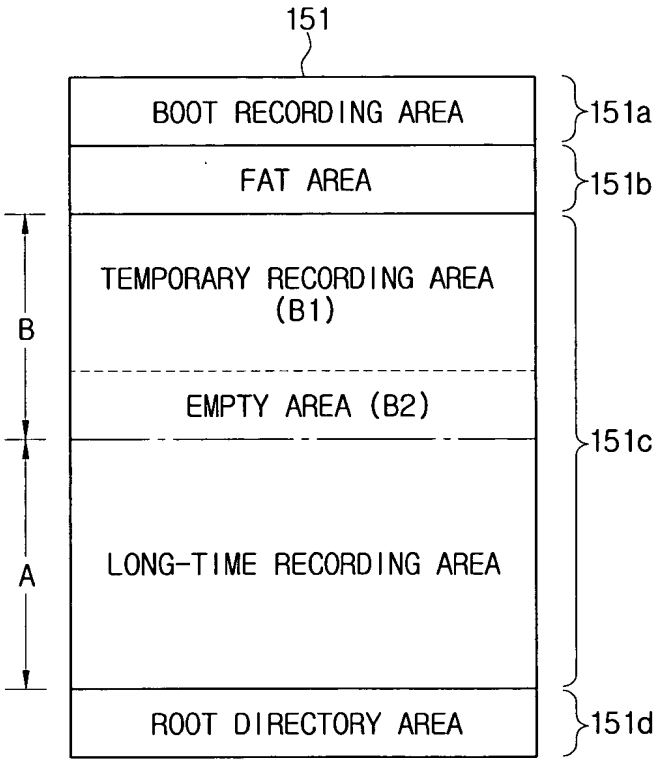

151
BOOT RECORDING AREA
151a
FAT AREA
151b
TEMPORARY RECORDING AREA (B1)
B
EMPTY AREA (B2)
151c
LONG-TIME RECORDING AREA
A
ROOT DIRECTORY AREA
151d

FIG. 71

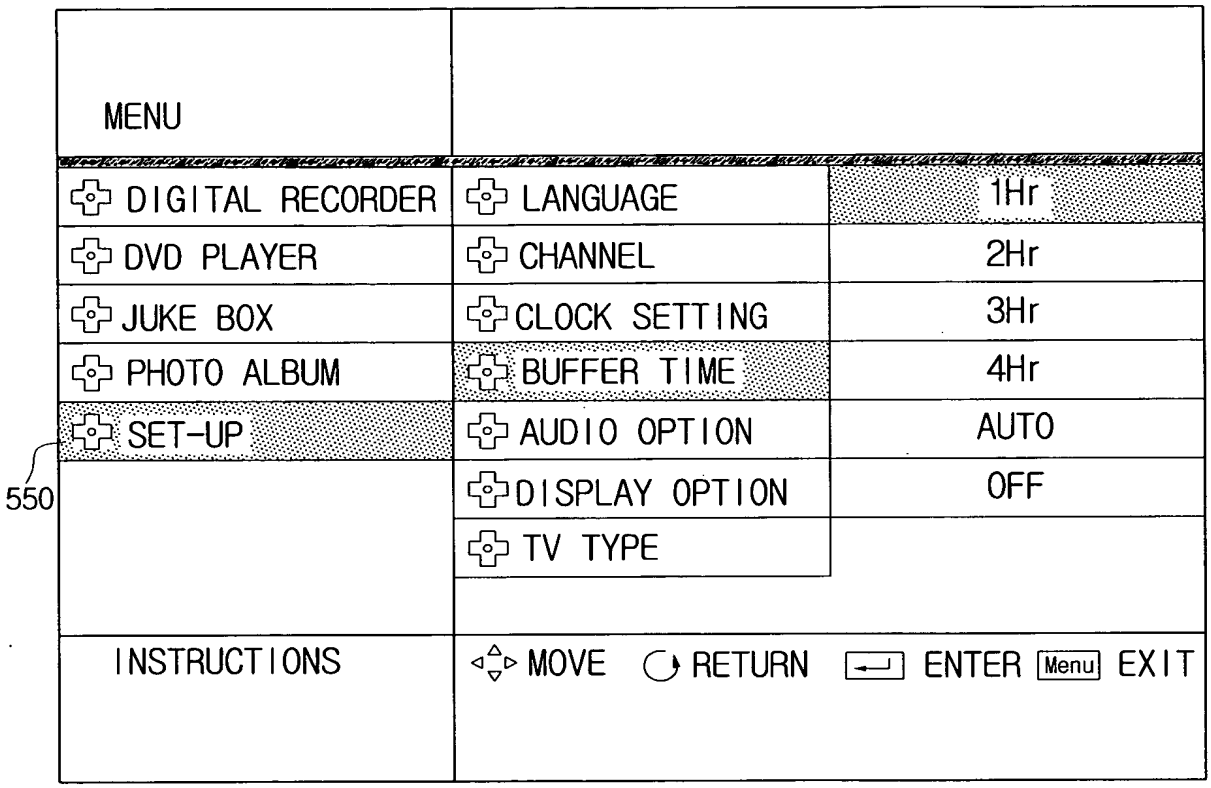

MENU
DIGITAL RECORDER
DVD PLAYER
JUKE BOX
PHOTO ALBUM
SET-UP
550
LANGUAGE
CHANNEL
CLOCK SETTING
BUFFER TIME
AUDIO OPTION
DISPLAY OPTION
TV TYPE
1Hr
2Hr
3Hr
4Hr
AUTO
OFF
INSTRUCTIONS
MOVE
RETURN
ENTER
Menu
EXIT

FIG. 72

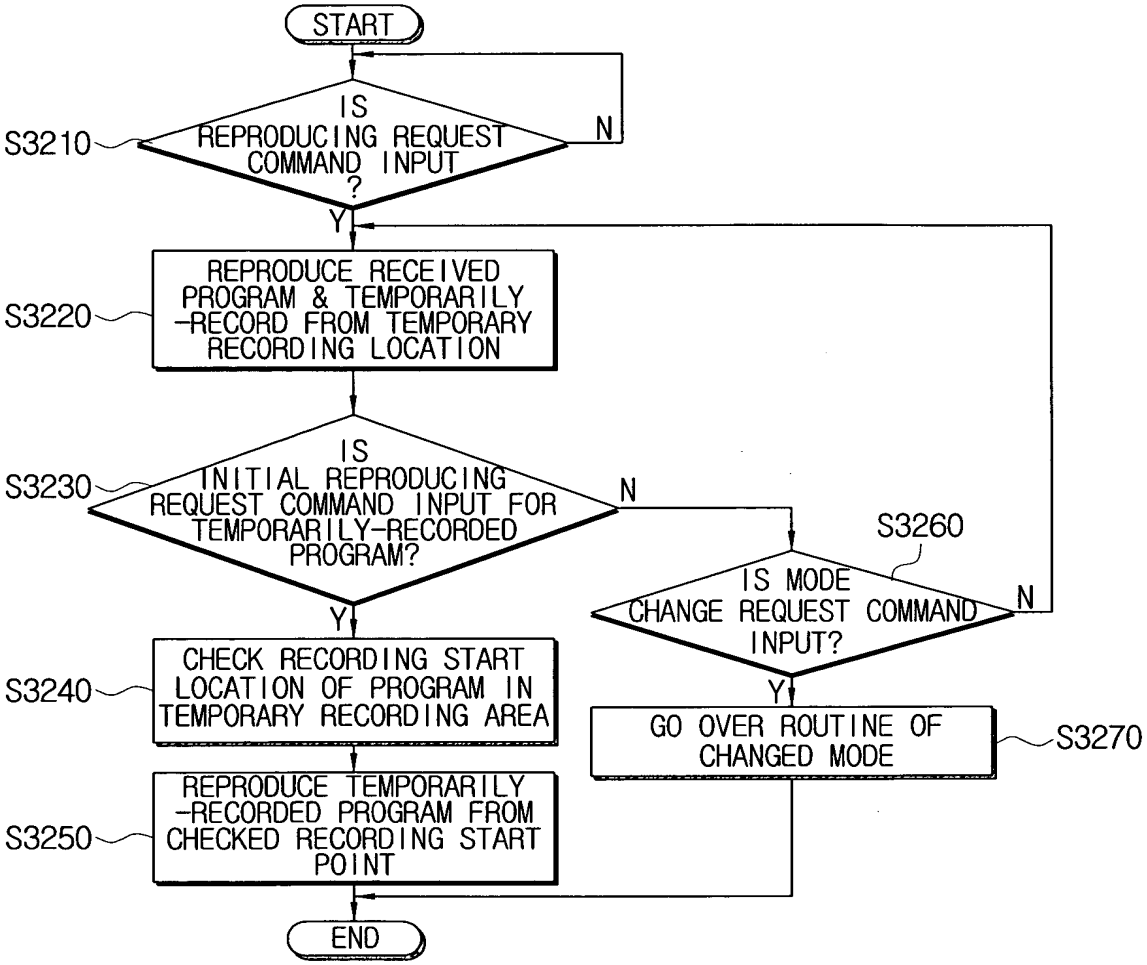

START
S3210
IS REPRODUCING REQUEST COMMAND INPUT ?
N
Y
S3220
REPRODUCE RECEIVED PROGRAM & TEMPORARILY -RECORD FROM TEMPORARY RECORDING LOCATION
S3230
IS INITIAL REPRODUCING REQUEST COMMAND INPUT FOR TEMPORARILY-RECORDED PROGRAM?
N
Y
S3240
CHECK RECORDING START LOCATION OF PROGRAM IN TEMPORARY RECORDING AREA
S3250
REPRODUCE TEMPORARILY -RECORDED PROGRAM FROM CHECKED RECORDING START POINT
S3260
IS MODE CHANGE REQUEST COMMAND INPUT?
N
Y
GO OVER ROUTINE OF CHANGED MODE
S3270
END

FIG. 73

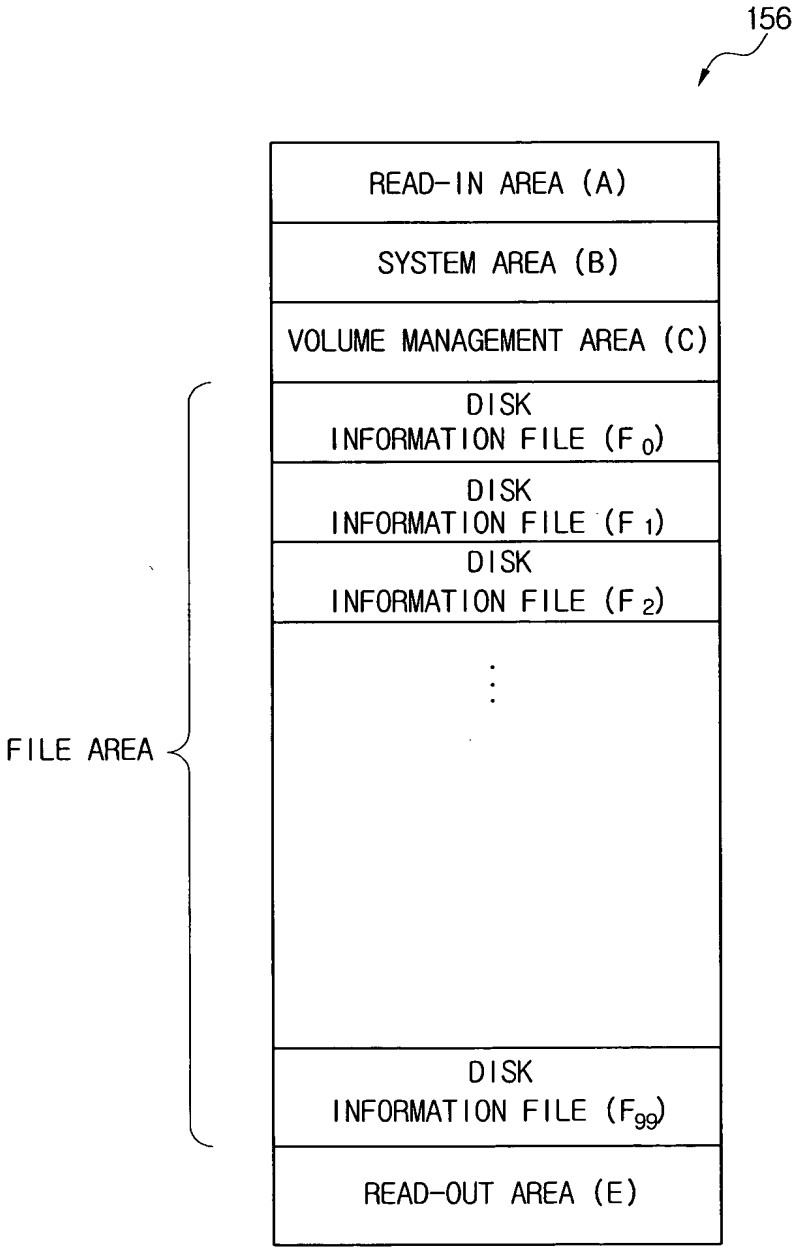

156
READ-IN AREA (A)
SYSTEM AREA (B)
VOLUME MANAGEMENT AREA (C)
DISK INFORMATION FILE (F_0)
DISK INFORMATION FILE (F_1)
DISK INFORMATION FILE (F_2)
DISK INFORMATION FILE (F_{99})
READ-OUT AREA (E)
FILE AREA

FIG. 74

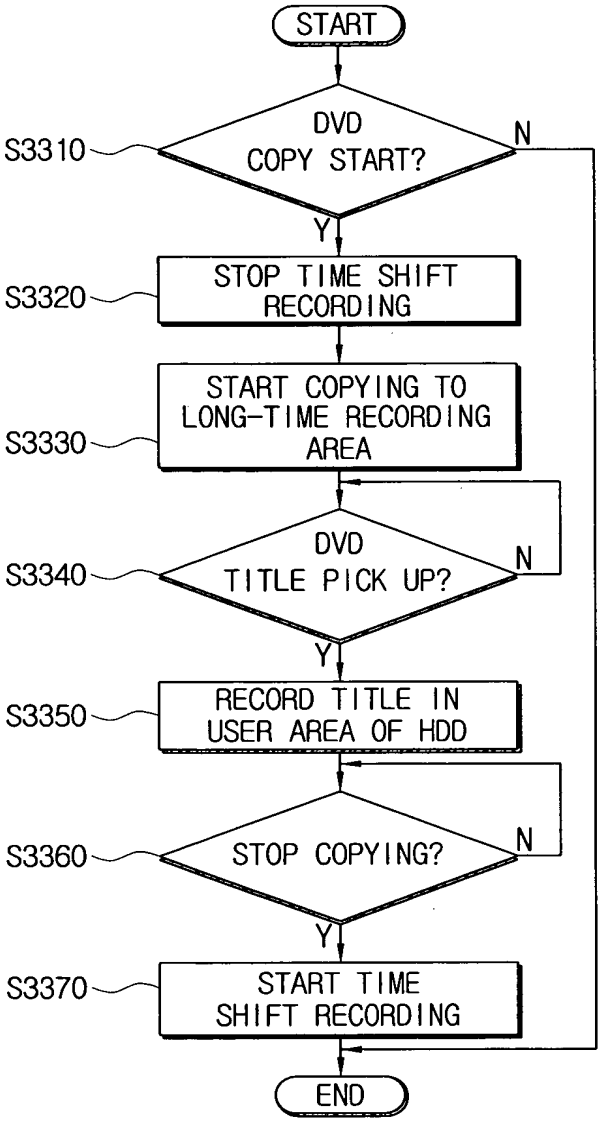

START
S3310
DVD COPY START?
N
Y
S3320
STOP TIME SHIFT RECORDING
S3330
START COPYING TO LONG-TIME RECORDING AREA
S3340
DVD TITLE PICK UP?
N
Y
S3350
RECORD TITLE IN USER AREA OF HDD
S3360
STOP COPYING?
N
Y
S3370
START TIME SHIFT RECORDING
END

FIG. 75

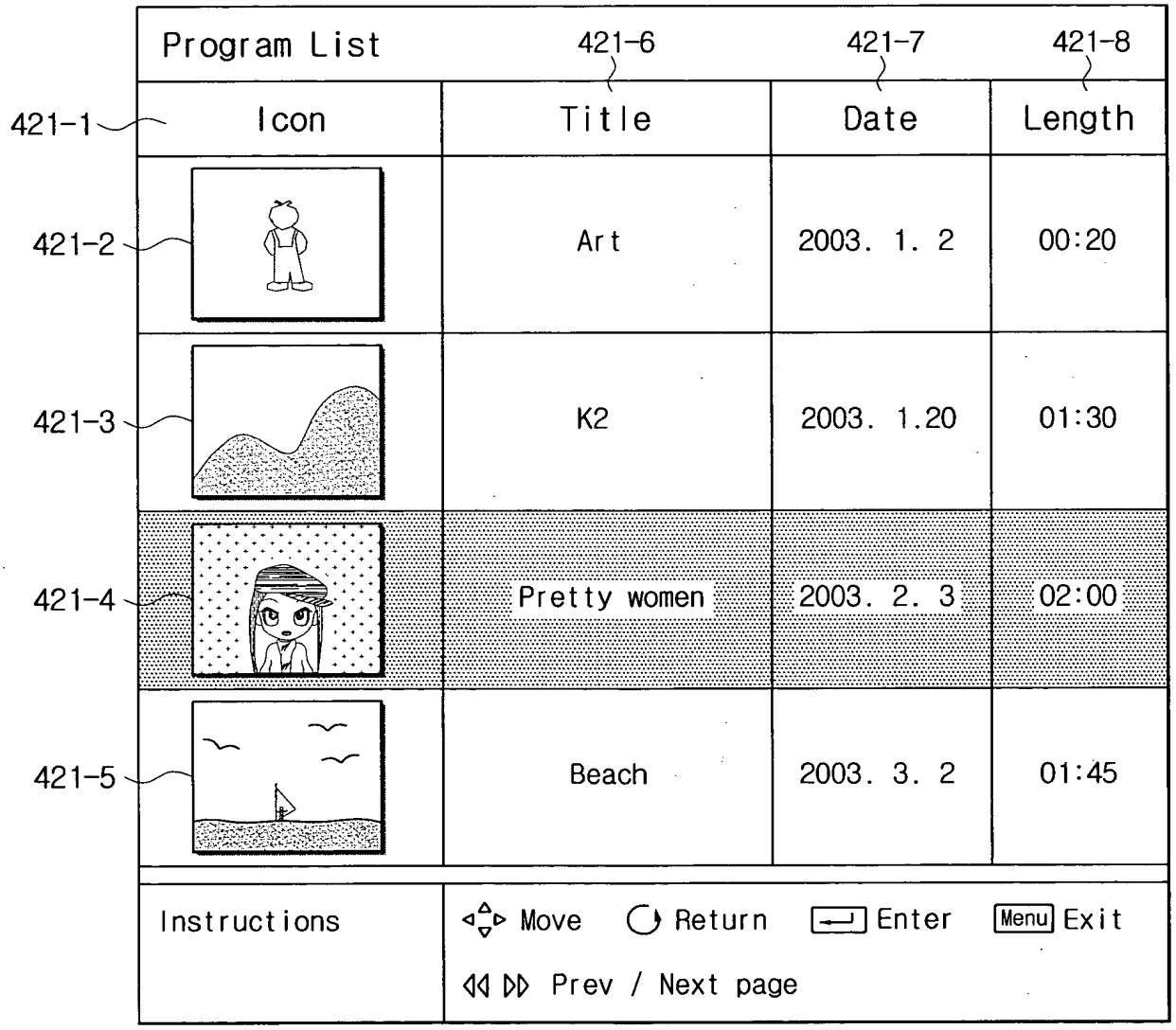

Program List
421-6
421-7
421-8
421-1
Icon
Title
Date
Length
421-2
Art
2003. 1. 2
00:20
421-3
K2
2003. 1.20
01:30
421-4
Pretty women
2003. 2. 3
02:00
421-5
Beach
2003. 3. 2
01:45
Instructions
Move
Return
Enter
Menu
Exit
Prev / Next page

FIG. 76

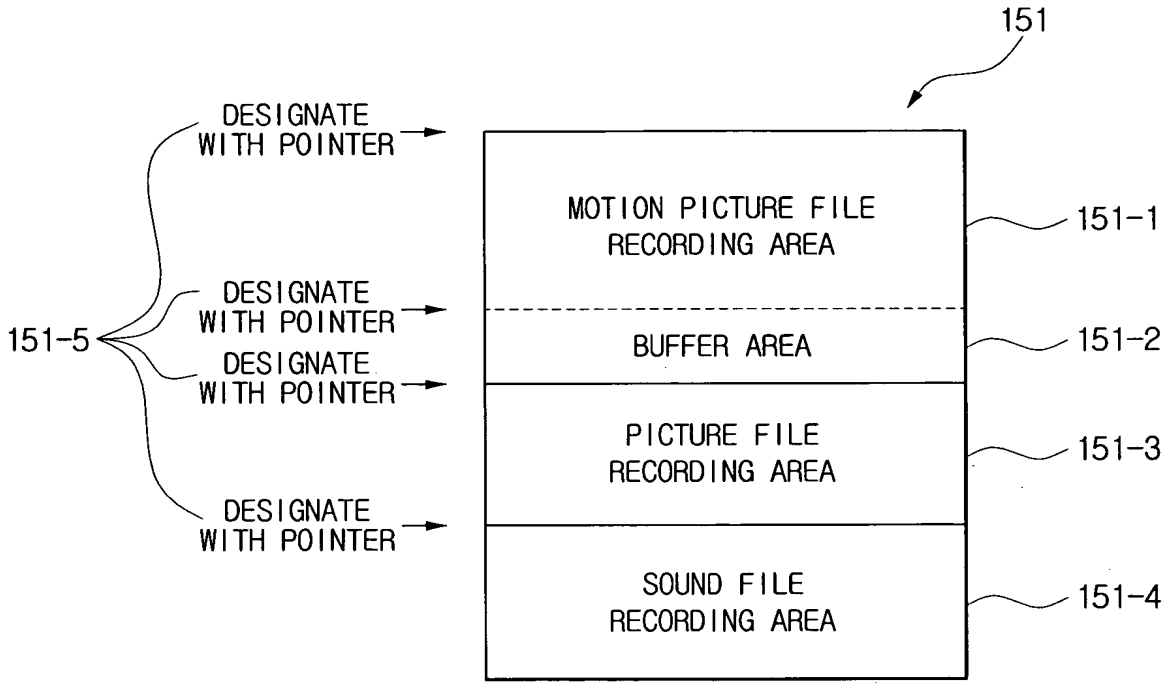

151
DESIGNATE WITH POINTER
DESIGNATE WITH POINTER
DESIGNATE WITH POINTER
DESIGNATE WITH POINTER
151-5
MOTION PICTURE FILE RECORDING AREA
151-1
BUFFER AREA
151-2
PICTURE FILE RECORDING AREA
151-3
SOUND FILE RECORDING AREA
151-4

FIG. 77A

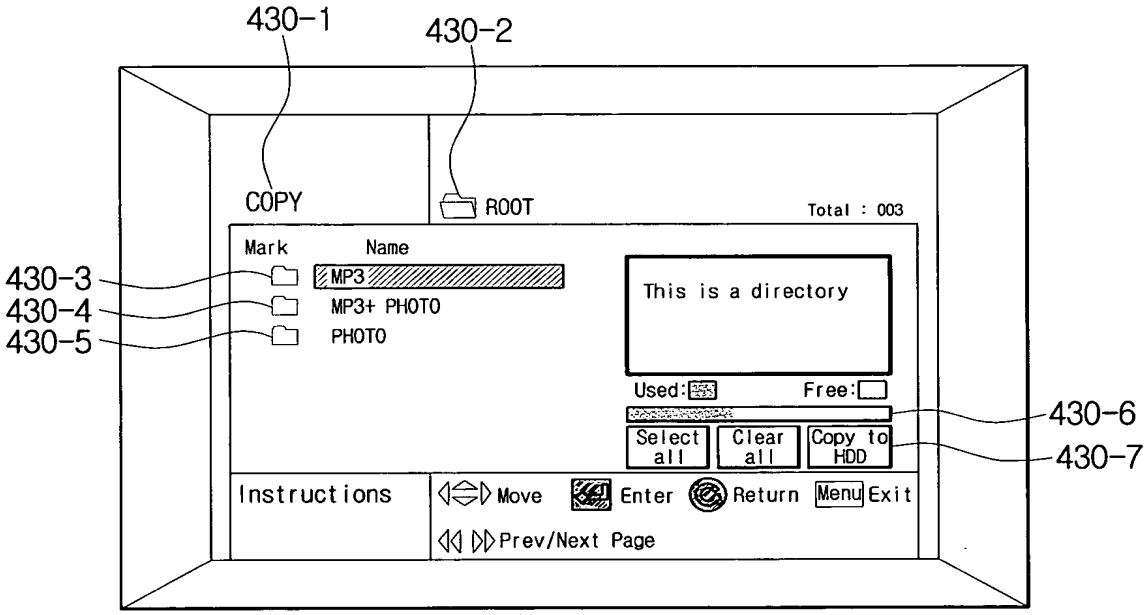


FIG. 77B

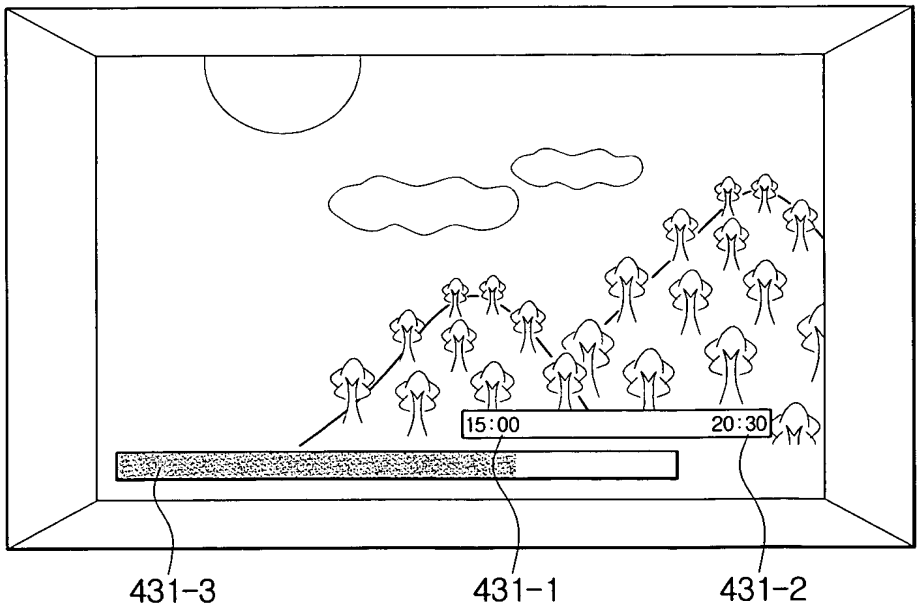


FIG. 78

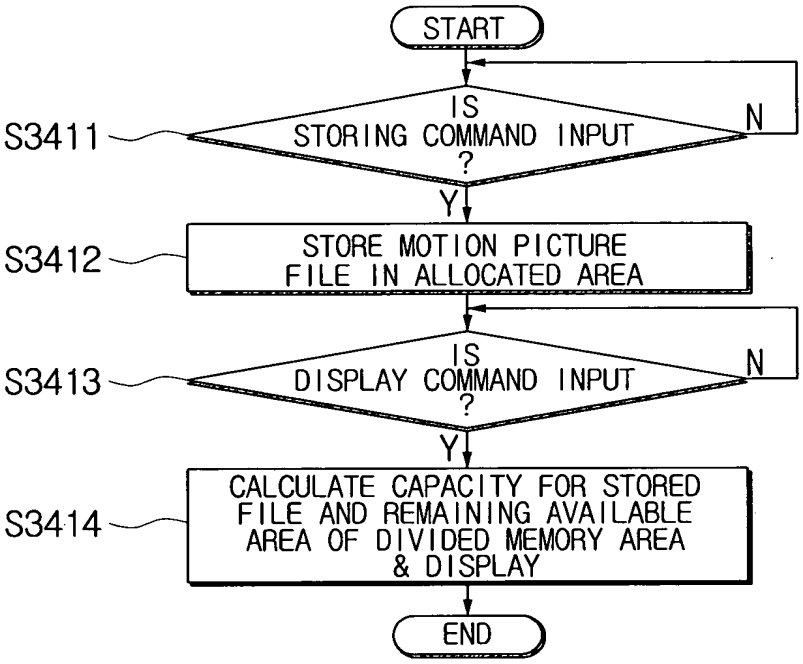

START
S3411
IS STORING COMMAND INPUT ?
N
Y
S3412
STORE MOTION PICTURE FILE IN ALLOCATED AREA
S3413
IS DISPLAY COMMAND INPUT ?
N
Y
S3414
CALCULATE CAPACITY FOR STORED FILE AND REMAINING AVAILABLE AREA OF DIVIDED MEMORY AREA & DISPLAY
END

FIG. 79

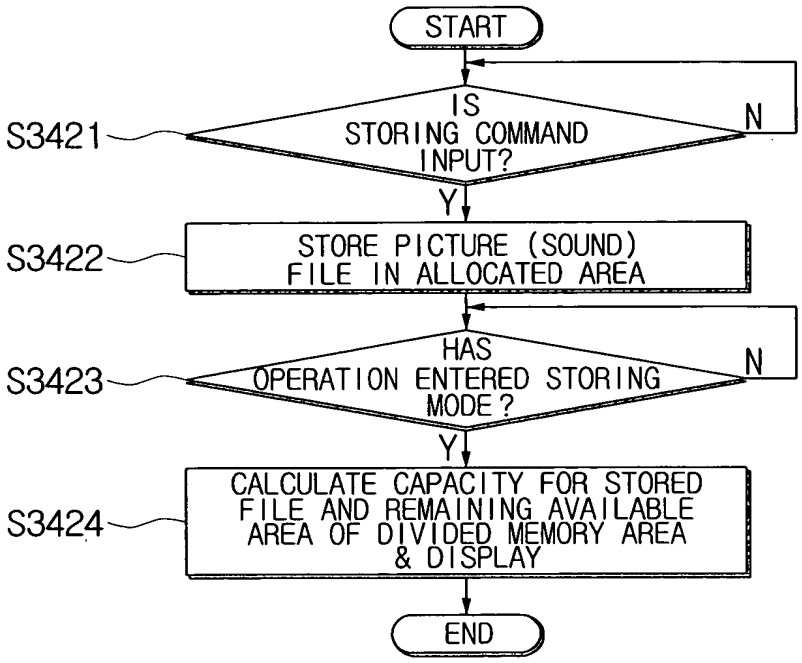

START
S3421
IS STORING COMMAND INPUT?
N
Y
S3422
STORE PICTURE (SOUND) FILE IN ALLOCATED AREA
S3423
HAS OPERATION ENTERED STORING MODE?
N
Y
S3424
CALCULATE CAPACITY FOR STORED FILE AND REMAINING AVAILABLE AREA OF DIVIDED MEMORY AREA & DISPLAY
END

FIG. 80

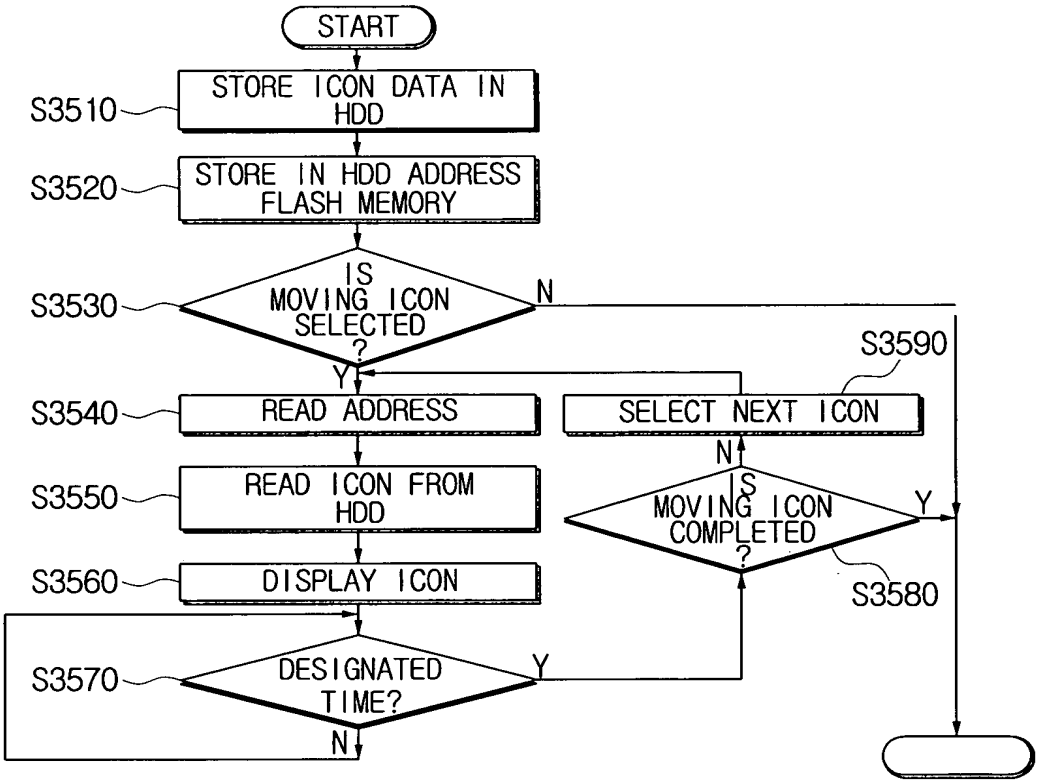

START
S3510
STORE ICON DATA IN HDD
S3520
STORE IN HDD ADDRESS FLASH MEMORY
S3530
IS MOVING ICON SELECTED ?
N
Y
S3590
S3540
READ ADDRESS
SELECT NEXT ICON
N
S3550
READ ICON FROM HDD
IS MOVING ICON COMPLETED ?
Y
S3580
S3560
DISPLAY ICON
S3570
DESIGNATED TIME?
Y
N

FIG. 81

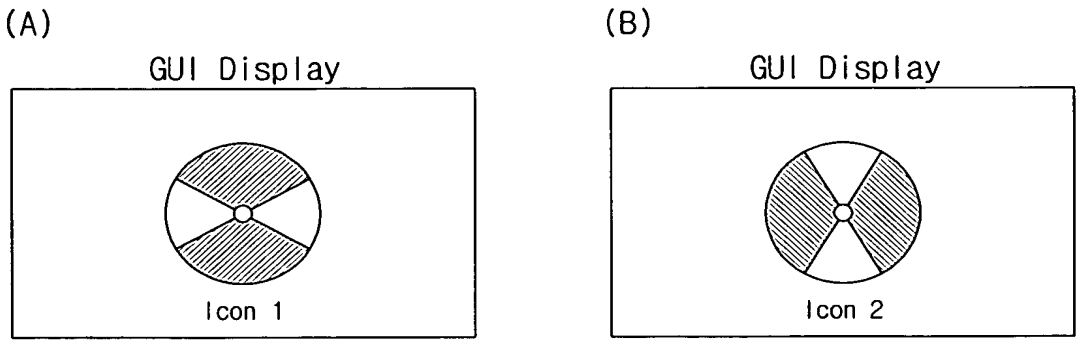

(A)
GUI Display
Icon 1
(B)
GUI Display
Icon 2

FIG. 82A

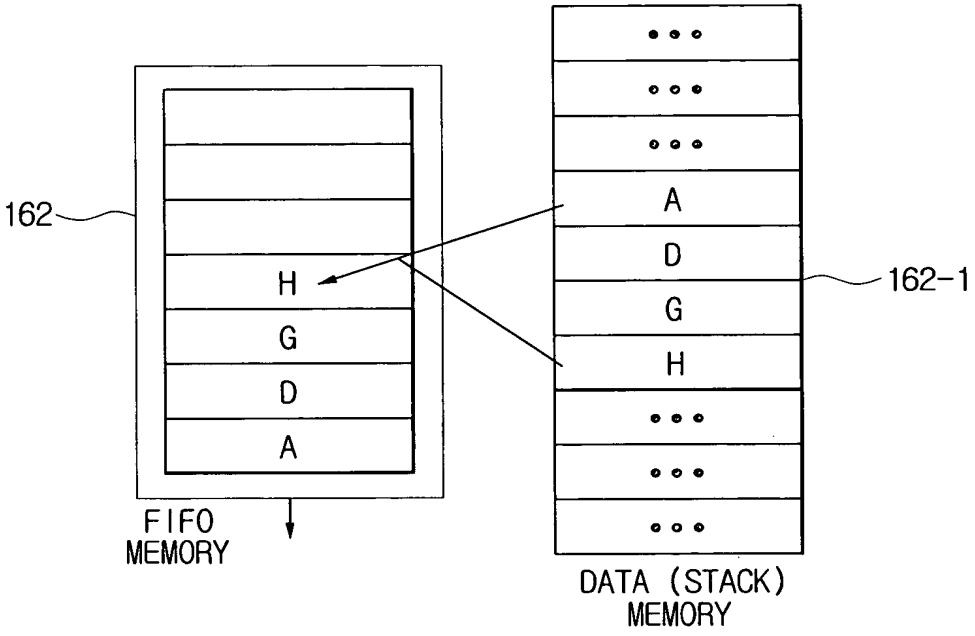


FIG. 82B

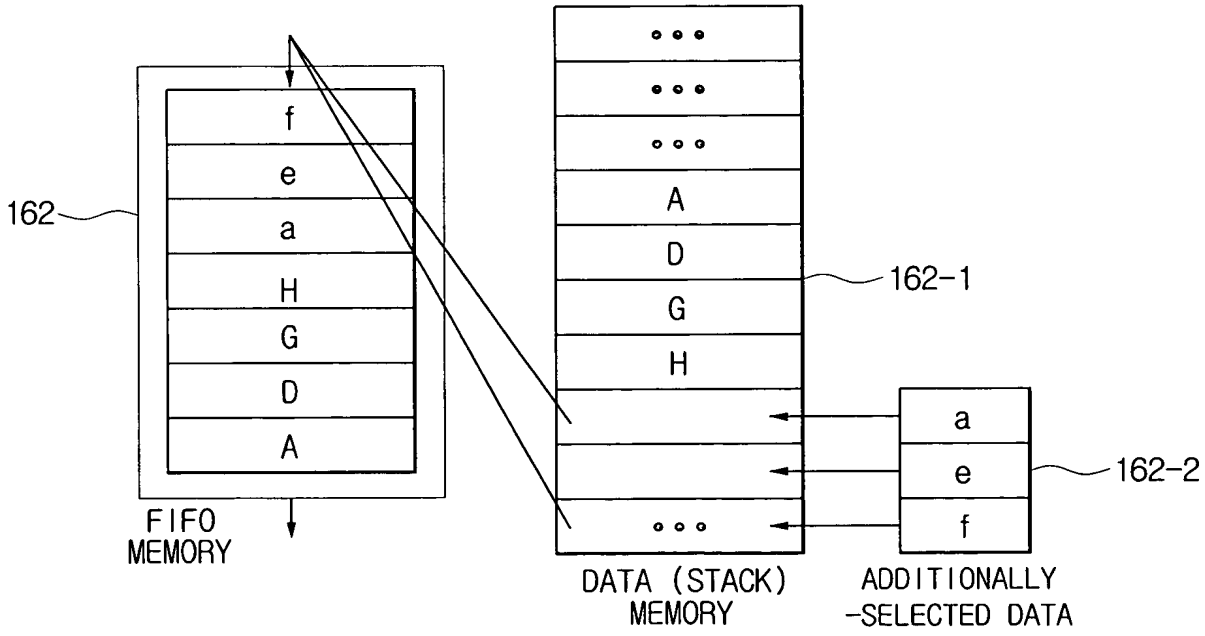


FIG. 83A

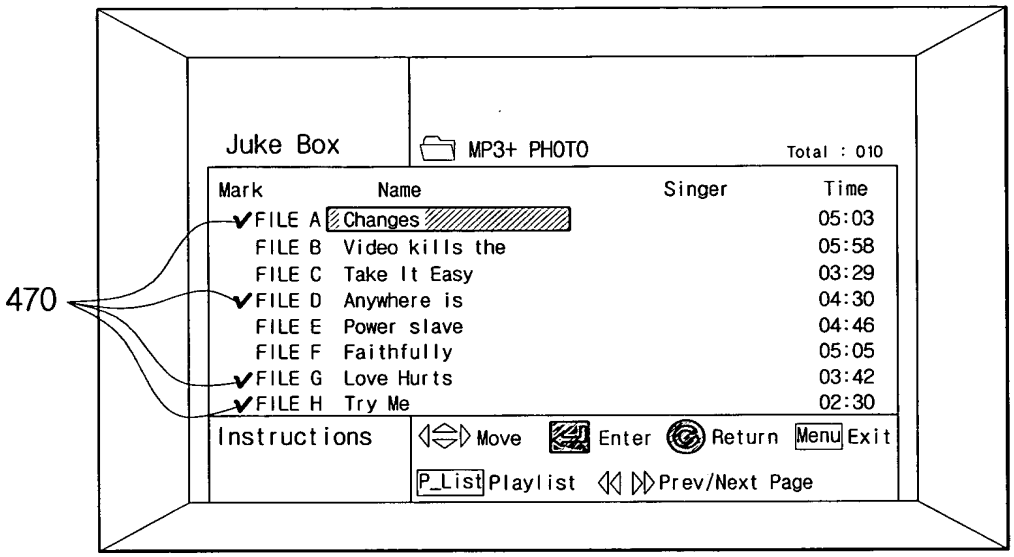


FIG. 83B

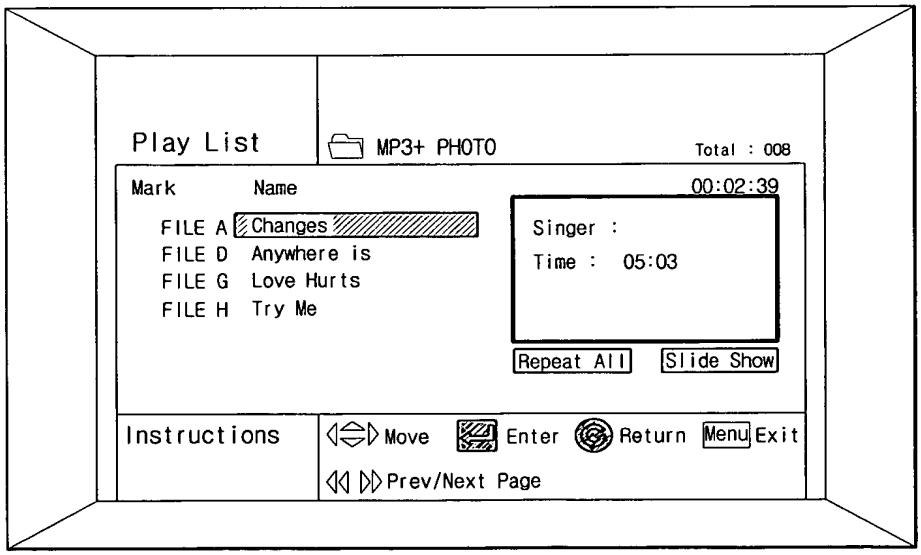


FIG. 83C

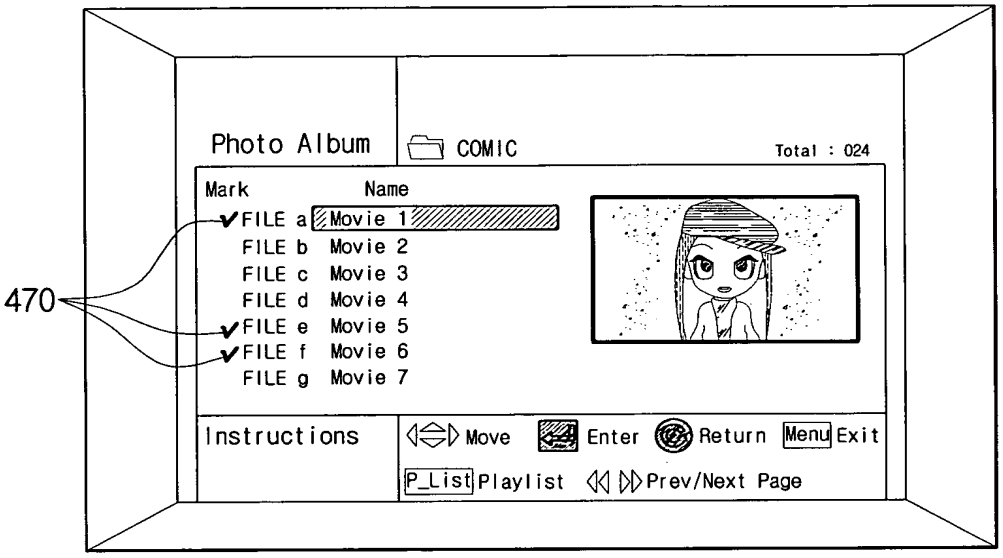


FIG. 83D

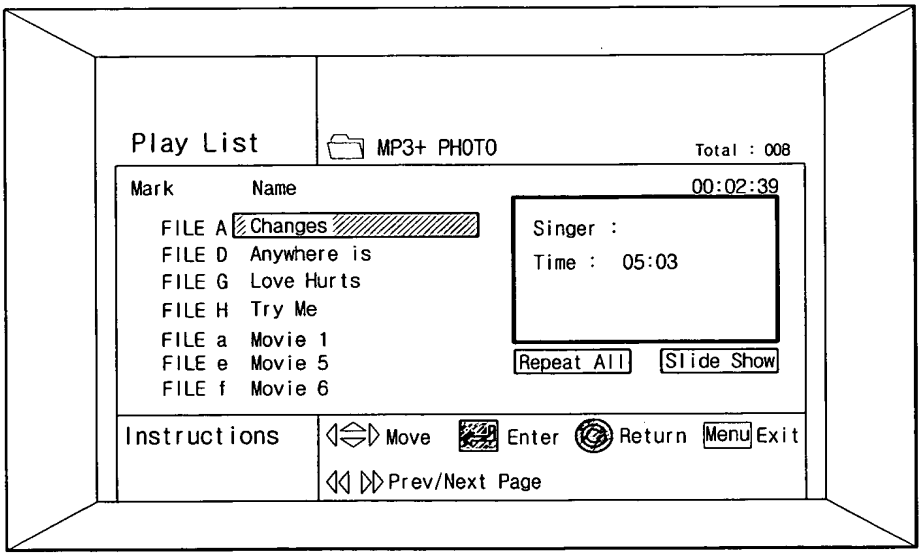
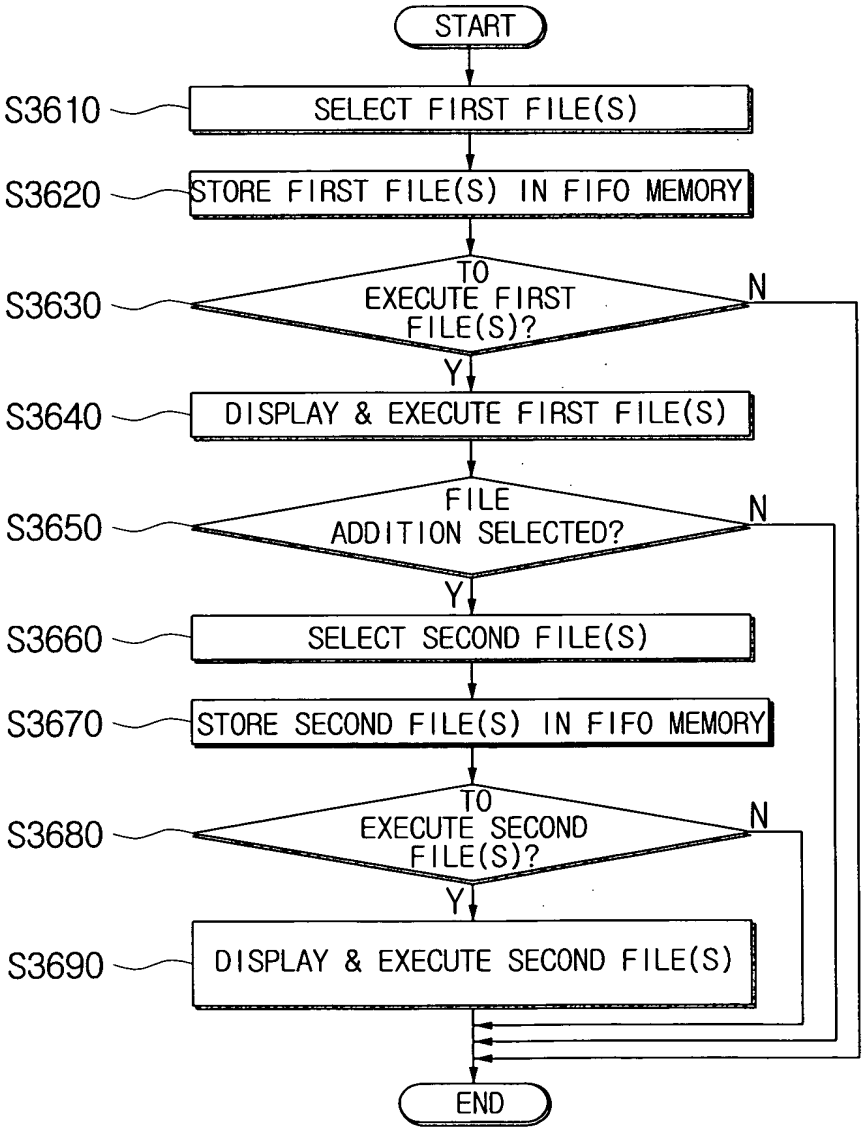


FIG. 84


START
S3610
SELECT FIRST FILE(S)
S3620
STORE FIRST FILE(S) IN FIFO MEMORY
S3630
TO EXECUTE FIRST FILE(S)?
N
Y
S3640
DISPLAY & EXECUTE FIRST FILE(S)
S3650
FILE ADDITION SELECTED?
N
Y
S3660
SELECT SECOND FILE(S)
S3670
STORE SECOND FILE(S) IN FIFO MEMORY
S3680
TO EXECUTE SECOND FILE(S)?
N
Y
S3690
DISPLAY & EXECUTE SECOND FILE(S)
END